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(57) Abstract

The present invention relates to peptides which exhibit potent anti-retroviral activity. The peptides of the invention comprise DP178 (SEQ ID:1) peptide corresponding to amino acids 638 to 673 of the HIV-1_{LAI} gp41 protein, and fragments, analogs and homologs of DP178. The invention further relates to the uses of such peptides as inhibitory of human and non-human retroviral, especially HIV, transmission to uninfected cells.

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METHODS AND COMPOSITIONS FOR INHIBITION OF MEMBRANE FUSION-ASSOCIATED EVENTS, INCLUDING HIV TRANSMISSION

This is a Continuation-In-Part of Serial No. 08/360,107 filed December 20, 1994, which is a Continuation-In-Part of Serial No. 08/255,208 filed June 7, 1994, which is a Continuation-In-Part of Serial No. 08/073,028 filed June 7, 1993, each of which is incorporated herein by reference in its entirety. This invention was made with Government support under Grant No. AI-30411-02 awarded by the National Institutes of Health. The Government has certain rights in the invention.

1. INTRODUCTION

The present invention relates, first, to DP178 (SEQ ID NO:1), a peptide corresponding to amino acids 638 to 673 of the HIV-1_{LAI} transmembrane protein (TM) gp41, and portions or analogs of DP178 (SEQ ID NO:1), which exhibit anti-membrane fusion capability, antiviral activity, such as the ability to inhibit HIV transmission to uninfected CD-4^+ cells, or an ability to modulate intracellular processes involving coiled-coil peptide structures. Further, the invention relates to the use of DP178 (SEQ ID NO:1) and DP178 portions and/or analogs as antifusogenic or antiviral compounds or as inhibitors of intracellular events involving coiled-coil peptide structures. The present invention also relates to peptides analogous to DP107 (SEQ ID NO:25), a peptide corresponding to amino acids 558 to 595 of the HIV-1_{LAI} transmembrane protein (TM) gp41, having amino acid sequences present in other viruses, such as enveloped viruses, and/or other organisms, and further relates to the uses of such peptides. These peptides exhibit anti-membrane fusion capability, antiviral activity, or the ability to

modulate intracellular processes involving coiled-coil peptide structures. The present invention additionally relates to methods for identifying compounds that disrupt the interaction between DP178 and DP107, and/or between DP107-like and DP178-like peptides. Further, the invention relates to the use of the peptides of the invention as diagnostic agents. For example, a DP178 peptide may be used as an HIV subtype-specific diagnostic. The invention is demonstrated, first, by way of an Example wherein DP178 (SEQ ID:1), and a peptide whose sequence is homologous to DP178 are each shown to be potent, non-cytotoxic inhibitors of HIV-1 transfer to uninfected CD-4$^+$ cells. The invention is further demonstrated by Examples wherein peptides having structural and/or amino acid motif similarity to DP107 and DP178 are identified in a variety of viral and nonviral organisms, and in examples wherein a number of such identified peptides derived from several different viral systems are demonstrated to exhibit antiviral activity.

2. BACKGROUND OF THE INVENTION

2.1 MEMBRANE FUSION EVENTS

Membrane fusion is a ubiquitous cell biological process (for a review, see White, J.M., 1992, Science 258:917-924). Fusion events which mediate cellular housekeeping functions, such as endocytosis, constitutive secretion, and recycling of membrane components, occur continuously in all eukaryotic cells.

Additional fusion events occur in specialized cells. Intracellularly, for example, fusion events are involved in such processes as occur in regulated exocytosis of hormones, enzymes and neurotransmitters.

Intercellularly, such fusion events feature prominently in, for example, sperm-egg fusion and myoblast fusion.

Fusion events are also associated with disease states. For example, fusion events are involved in the formation of giant cells during inflammatory reactions, the entry of all enveloped viruses into cells, and, in the case of human immunodeficiency virus (HIV), for example, are responsible for the virally induced cell-cell fusion which leads to cell death.

2.2. THE HUMAN IMMUNODEFICIENCY VIRUS

The human immunodeficiency virus (HIV) has been implicated as the primary cause of the slowly degenerative immune system disease termed acquired immune deficiency syndrome (AIDS) (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo, R. et al., 1984, Science 224:500-503). There are at least two distinct types of HIV: HIV-1 (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo R. et al., 1984, Science 224:500-503) and HIV-2 (Clavel, F. et al., 1986, Science 233:343-346; Guyader, M. et al., 1987, Nature 326:662-669). Further, a large amount of genetic heterogeneity exists within populations of each of these types. Infection of human CD-4$^+$ T-lymphocytes with an HIV virus leads to depletion of the cell type and eventually to opportunistic infections, neurological dysfunctions, neoplastic growth, and ultimately death.

HIV is a member of the lentivirus family of retroviruses (Teich, N. et al., 1984, RNA Tumor Viruses, Weiss, R. et al., eds., CSH-Press, pp. 949-956). Retroviruses are small enveloped viruses that contain a diploid, single-stranded RNA genome, and

replicate via a DNA intermediate produced by a virally-encoded reverse transcriptase, an RNA-dependent DNA polymerase (Varmus, H., 1988, Science 240:1427-1439). Other retroviruses include, for example, oncogenic viruses such as human T-cell leukemia viruses (HTLV-I,-II,-III), and feline leukemia virus.

The HIV viral particle consists of a viral core, composed of capsid proteins, that contains the viral RNA genome and those enzymes required for early replicative events. Myristylated Gag protein forms an outer viral shell around the viral core, which is, in turn, surrounded by a lipid membrane enveloped derived from the infected cell membrane. The HIV enveloped surface glycoproteins are synthesized as a single 160 Kd precursor protein which is cleaved by a cellular protease during viral budding into two glycoproteins, gp41 and gp120. gp41 is a transmembrane protein and gp120 is an extracellular protein which remains non-covalently associated with gp41, possibly in a trimeric or multimeric form (Hammarskjold, M. and Rekosh, D., 1989, Biochem. Biophys. Acta 989:269-280).

HIV is targeted to CD-4$^+$ cells because the CD-4 cell surface protein acts as the cellular receptor for the HIV-1 virus (Dalgleish, A. et al., 1984, Nature 312:763-767; Klatzmann et al., 1984, Nature 312:767-768; Maddon et al., 1986, Cell 47:333-348). Viral entry into cells is dependent upon gp120 binding the cellular CD-4$^+$ receptor molecules (McDougal, J.S. et al., 1986, Science 231:382-385; Maddon, P.J. et al., 1986, Cell 47:333-348) and thus explains HIV's tropism for CD-4$^+$ cells, while gp41 anchors the enveloped glycoprotein complex in the viral membrane.

2.3. HIV TREATMENT

HIV infection is pandemic and HIV associated diseases represent a major world health problem. Although considerable effort is being put into the successful design of effective therapeutics, currently no curative anti-retroviral drugs against AIDS exist. In attempts to develop such drugs, several stages of the HIV life cycle have been considered as targets for therapeutic intervention (Mitsuya, H. et al., 1991, FASEB J. 5:2369-2381). For example, virally encoded reverse transcriptase has been one focus of drug development. A number of reverse-transcriptase-targeted drugs, including 2',3'-dideoxynucleoside analogs such as AZT, ddI, ddC, and d4T have been developed which have been shown to been active against HIV (Mitsuya, H. et al., 1991, Science 249:1533-1544). While beneficial, these nucleoside analogs are not curative, probably due to the rapid appearance of drug resistant HIV mutants (Lander, B. et al., 1989, Science 243:1731-1734). In addition, the drugs often exhibit toxic side effects such as bone marrow suppression, vomiting, and liver function abnormalities.

Attempts are also being made to develop drugs which can inhibit viral entry into the cell, the earliest stage of HIV infection. Here, the focus has thus far been on CD4, the cell surface receptor for HIV. Recombinant soluble CD4, for example, has been shown to inhibit infection of CD-4$^+$ T-cells by some HIV-1 strains (Smith, D.H. et al., 1987, Science 238:1704-1707). Certain primary HIV-1 isolates, however, are relatively less sensitive to inhibition by recombinant CD-4 (Daar, E. et al., 1990, Proc. Natl. Acad. Sci. USA 87:6574-6579). In addition,

recombinant soluble CD-4 clinical trials have produced inconclusive results (Schooley, R. et al., 1990, Ann. Int. Med. 112:247-253; Kahn, J.O. et al., 1990, Ann. Int. Med. 112:254-261; Yarchoan, R. et al., 1989, Proc. Vth Int. Conf. on AIDS, p. 564, MCP 137).

The late stages of HIV replication, which involve crucial virus-specific secondary processing of certain viral proteins, have also been suggested as possible anti-HIV drug targets. Late stage processing is dependent on the activity of a viral protease, and drugs are being developed which inhibit this protease (Erickson, J., 1990, Science 249:527-533). The clinical outcome of these candidate drugs is still in question.

Attention is also being given to the development of vaccines for the treatment of HIV infection. The HIV-1 enveloped proteins (gp160, gp120, gp41) have been shown to be the major antigens for anti-HIV antibodies present in AIDS patients (Barin, et al., 1985, Science 228:1094-1096). Thus far, therefore, these proteins seem to be the most promising candidates to act as antigens for anti-HIV vaccine development. To this end, several groups have begun to use various portions of gp160, gp120, and/or gp41 as immunogenic targets for the host immune system. See for example, Ivanoff, L. et al., U.S. Pat. No. 5,141,867; Saith, G. et al., WO 92/22,654; Shafferman, A., WO 91/09,872; Formoso, C. et al., WO 90/07,119. Clinical results concerning these candidate vaccines, however, still remain far in the future.

Thus, although a great deal of effort is being directed to the design and testing of anti-retroviral drugs, a truly effective, non-toxic treatment is still needed.

3. SUMMARY OF THE INVENTION

The present invention relates, first, to DP178 (SEQ ID:1), a 36-amino acid synthetic peptide corresponding to amino acids 638 to 673 of the transmembrane protein (TM) gp41 from the HIV-1 isolate LAI (HIV-1_{LAI}), which exhibits potent anti-HIV-1 activity. As evidenced by the Example presented below, in Section 6, the DP178 (SEQ ID:1) antiviral activity is so high that, on a weight basis, no other known anti-HIV agent is effective at concentrations as low as those at which DP178 (SEQ ID:1) exhibits its inhibitory effects.

The invention further relates to those portions and analogs of DP178 which also show such antiviral activity, and/or show anti-membrane fusion capability, or an ability to modulate intracellular processes involving coiled-coil peptide structures. The term "DP178 analog" refers to a peptide which contains an amino acid sequence corresponding to the DP178 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and/or organisms other than HIV-1_{LAI}. Such DP178 analog peptides may, therefore, correspond to DP178-like amino acid sequences present in other viruses, such as, for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such analogous DP178 peptides may also correspond to DP178-like amino acid sequences present in nonviral organisms.

The invention further relates to peptides DP107 (SEQ ID NO:25) analogs. DP107 is a peptide corresponding to amino acids 558-595 of the HIV-1_{LAI} transmembrane protein (TM) gp41. The term "DP107 analog" as used herein refers to a peptide which contains an amino acid sequence corresponding to the

DP107 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and organisms other than HIV-1_{LAI}. Such DP107 analog peptides may, therefore, correspond to DP107-like amino acid sequences present in other viruses, such as, for for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such DP107 analog peptides may also correspond to DP107-like amino acid sequences present in nonviral organisms.

Further, the peptides of the invention include DP107 analog and DP178 analog peptides having amino acid sequences recognized or identified by the 107x178x4, ALLMOTI5 and/or PLZIP search motifs described herein.

The peptides of the invention may, for example, exhibit antifusogenic activity, antiviral activity, and/or may have the ability to modulate intracellular processes which involve coiled-coil peptide structures. With respect to the antiviral activity of the peptides of the invention, such an antiviral activity includes, but is not limited to the inhibition of HIV transmission to uninfected $CD\text{-}4^+$ cells. Additionally, the antifusogenic capability, antiviral activity or intracellular modulatory activity of the peptides of the invention merely requires the presence of the peptides of the invention, and, specifically, does not require the stimulation of a host immune response directed against such peptides.

The peptides of the invention may be used, for example, as inhibitors of membrane fusion-asociated events, such as, for example, the inhibition of human and non-human retroviral, especially HIV, transmission to uninfected cells. It is further contemplated that

the peptides of the invention may be used as modulators of intracellular events involving coiled-coil peptide structures.

The peptides of the invention may, alternatively, be used to identify compounds which may themselves exhibit antifusogenic, antiviral, or intracellular modulatory activity. Additional uses include, for example, the use of the peptides of the invention as organism or viral type and/or subtype-specific diagnostic tools.

The terms "antifusogenic" and "anti-membrane fusion", as used herein, refer to an agent's ability to inhibit or reduce the level of membrane fusion events between two or more moieties relative to the level of membrane fusion which occurs between said moieties in the absence of the peptide. The moieties may be, for example, cell membranes or viral structures, such as viral envelopes or pili. The term "antiviral", as used herein, refers to the compound's ability to inhibit viral infection of cells, via, for example, cell-cell fusion or free virus infection. Such infection may involve membrane fusion, as occurs in the case of enveloped viruses, or some other fusion event involving a viral structure and a cellular structure (e.g., such as the fusion of a viral pilus and bacterial membrane during bacterial conjugation).

It is also contemplated that the peptides of the invention may exhibit the ability to modulate intracellular events involving coiled-coil peptide structures. "Modulate", as used herein, refers to a stimulatory or inhibitory effect on the intracellular process of interest relative to the level or activity of such a process in the absence of a peptide of the invention.

Embodiments of the invention are demonstrated below wherein an extremely low concentration of DP178 (SEQ ID:1), and very low concentrations of a DP178 homolog (SEQ ID:3) are shown to be potent inhibitors of HIV-1 mediated CD-4$^+$ cell-cell fusion (i.e., syncytial formation) and infection of CD-4$^+$ cells by cell-free virus. Further, it is shown that DP178 (SEQ ID:1) is not toxic to cells, even at concentrations 3 logs higher than the inhibitory DP-178 (SEQ ID:1) concentration.

The present invention is based, in part, on the surprising discovery that the DP107 and DP178 domains of the HIV gp41 protein non-covalently complex with each other, and that their interaction is required for the normal infectivity of the virus. This discovery is described in the Example presented, below, in Section 8. The invention, therefore, further relates to methods for identifying antifusogenic, including antiviral, compounds that disrupt the interaction between DP107 and DP178, and/or between DP107-like and DP178-like peptides.

Additional embodiments of the invention (specifically, the Examples presents in Sections 9-16 and 19-25, below) are demonstrated, below, wherein peptides, from a variety of viral and nonviral sources, having structural and/or amino acid motif similarity to DP107 and DP178 are identified, and search motifs for their identification are described. Further, Examples (in Sections 17, 18, 25-29) are presented wherein a number of the peptides of the invention are demonstrated exhibit substantial antiviral activity or activity predictive of antiviral activity.

3.1. DEFINITIONS

Peptides are defined herein as organic compounds comprising two or more amino acids covalently joined by peptide bonds. Peptides may be referred to with respect to the number of constituent amino acids, i.e., a dipeptide contains two amino acid residues, a tripeptide contains three, etc. Peptides containing ten or fewer amino acids may be referred to as oligopeptides, while those with more than ten amino acid residues are polypeptides. Such peptides may also include any of the modifications and additional amino and carboxy groups as are described herein.

Peptide sequences defined herein are represented by one-letter symbols for amino acid residues as follows:

A (alanine)
R (arginine)
N (asparagine)
D (aspartic acid)
C (cysteine)
Q (glutamine)
E (glutamic acid)
G (glycine)
H (histidine)
I (isoleucine)
L (leucine)
K (lysine)
M (methionine)
F (phenylalanine)
P (proline)
S (serine)
T (threonine)
W (tryptophan)
Y (tyrosine)
V (valine)

4. BRIEF DESCRIPTION OF THE FIGURES

FIG. 1. Amino acid sequence of DP178 (SEQ ID:1) derived from HIV_{LAI}; DP178 homologs derived from $HIV\text{-}1_{SF2}$ (DP-185; SEQ ID:3), $HIV\text{-}1_{RF}$ (SEQ ID:4), and $HIV\text{-}1_{MN}$ (SEQ ID:5); DP178 homologs derived from amino acid sequences of two prototypic HIV-2 isolates, namely, $HIV\text{-}2_{rod}$ (SEQ ID:6) and $HIV\text{-}2_{NIHZ}$ (SEQ ID:7); control peptides: DP-180 (SEQ ID:2), a peptide incorporating the amino acid residues of DP178 in a scrambled sequence; DP-118 (SEQ ID:10) unrelated to DP178, which inhibits HIV-1 cell free virus infection; DP-125 (SEQ ID:8), unrelated to DP178, also inhibits HIV-1 cell free virus infection; DP-116 (SEQ ID:9), unrelated to DP178, is negative for inhibition of HIV-1 infection when tested using a cell-free virus infection assay. Throughout the figures, the one letter amino acid code is used.

FIG. 2. Inhibition of HIV-1 cell-free virus infection by synthetic peptides. IC_{50} refers to the concentration of peptide that inhibits RT production from infected cells by 50% compared to the untreated control. Control: the level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

FIG. 3. Inhibition of HIV-1 and HIV-2 cell-free virus infection by the synthetic peptide DP178 (SEQ ID:1). IC_{50}: concentration of peptide that inhibits RT production by 50% compared to the untreated control. Control: Level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

FIG. 4A-4B. Fusion Inhibition Assays. FIG 4A: DP178 (SEQ ID:1) inhibition of HIV-1 prototypic isolate-mediated syncytial formation; data represents the number of virus-induced syncytial per cell. FIG.

4B: DP-180 (SEQ ID:2) represents a scrambled control peptide; DP-185 (SEQ ID:3) represents a DP178 homolog derived from HIV-1_{SF2} isolate; Control, refers to the number of syncytial produced in the absence of peptide.

FIG. 5. Fusion inhibition assay: HIV-1 vs. HIV-2. Data represents the number of virus-induced syncytial per well. ND: not done.

FIG. 6. Cytotoxicity study of DP178 (SEQ ID:1) and DP-116 (SEQ ID:9) on CEM cells. Cell proliferation data is shown.

FIG. 7. Schematic representation of HIV-gp41 and maltose binding protein (MBP)-gp41 fusion proteins. DP107 and DP178 are synthetic peptides based on the two putative helices of gp41. The letter P in the DP107 boxes denotes an Ile to Pro mutation at amino acid number 578. Amino acid residues are numbered according to Meyers et al., "Human Retroviruses and AIDS", 1991, Theoret. Biol. and Biophys. Group, Los Alamos Natl. Lab., Los Alamos, NM. The proteins are more fully described, below, in Section 8.1.1.

FIG. 8. A point mutation alters the conformation and anti-HIV activity of M41.

FIG. 9. Abrogation of DP178 anti-HIV activity. Cell fusion assays were carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41PΔ178.

FIG. 10. Binding of DP178 to leucine zipper of gp41 analyzed by FAb-D ELISA.

FIG. 11A-B. Models for a structural transition in the HIV-1 TM protein. Two models are proposed which indicate a structural transition from a native oligomer to a fusogenic state following a trigger event (possibly gp120 binding to CD4). Common

features of both models include (1) the native state is held together by noncovalent protein-protein interactions to form the heterodimer of gp120/41 and other interactions, principally though gp41 interactive sites, to form homo-oligomers on the virus surface of the gp120/41 complexes; (2) shielding of the hydrophobic fusogenic peptide at the N-terminus (F) in the native state; and (3) the leucine zipper domain (DP107) exists as a homo-oligomer coiled coil only in the fusogenic state. The major differences in the two models include the structural state (native or fusogenic) in which the DP107 and DP178 domains are complexed to each other. In the first model (FIG. 11A) this interaction occurs in the native state and in the second (FIG. 11B), it occurs during the fusogenic state. When triggered, the fusion complex in the model depicted in (A) is generated through formation of coiled-coil interactions in homologous DP107 domains resulting in an extended α-helix. This conformational change positions the fusion peptide for interaction with the cell membrane. In the second model (FIG. 11B), the fusogenic complex is stabilized by the association of the DP178 domain with the DP107 coiled-coil.

FIG. 12. Motif design using heptad repeat positioning of amino acids of known coiled-coils.

FIG. 13. Motif design using proposed heptad repeat positioning of amino acids of DP107 and DP178.

FIG. 14. Hybrid motif design crossing GCN4 and DP107.

FIG. 15. Hybrid motif design crossing GCN4 and DP178.

FIG. 16. Hybrid motif design 107x178x4, crossing DP107 and DP178. This motif was found to be

the most consistent at identifying relevant DP107-like and DP178-like peptide regions.

FIG. 17. Hybrid motif design crossing GCN4, DP107, and DP178.

FIG. 18. Hybrid motif design ALLMOTI5 crossing GCN4, DP107, DP178, c-Fos c-Jun, c-Myc, and Flu Loop 36.

FIG. 19. PLZIP motifs designed to identify N-terminal proline-leucine zipper motifs.

FIG. 20. Search results for HIV-1 (BRU isolate) enveloped protein gp41. Sequence search motif designations: Spades (♠): 107x178x4; Hearts (♥) ALLMOTI5; Clubs (♣): PLZIP; Diamonds (♦): transmembrane region (the putative transmembrane domains were identified using a PC/Gene program designed to search for such peptide regions). Asterisk (*): Lupas method. The amino acid sequences identified by each motif are bracketed by the respective characters. Representative sequences chosen based on 107x178x4 searches are underlined and in bold. DP107 and DP178 sequences are marked, and additionally double-underlined and italicized.

FIG. 21. Search results for human respiratory syncytial virus (RSV) strain A2 fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 22. Search results for simian immunodeficiency virus (SIV) enveloped protein gp41 (AGM3 isolate). Sequence search motif designations are as in FIG. 20.

FIG. 23. Search results for canine distemper virus (strain Onderstepoort) fusion glycoprotein 1. Sequence search motif designations are as in FIG. 20.

FIG. 24. Search results for newcastle disease virus (strain Australia-Victoria/32) fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 25. Search results for human parainfluenza 3 virus (strain NIH 47885) fusion glycoprotein F1. Sequence search motif designations are as in FIG. 20.

FIG. 26. Search results for influenza A virus (strain A/AICHI/2/68) hemagglutinin precursor HA2. Sequence search designations are as in FIG. 20.

FIG. 27A-F. Respiratory Syncytial Virus (RSV) peptide antiviral and circular dichroism data. FIG. 27A-C: Peptides derived from the F2 DP178/DP107-like region. Antiviral and CD data. FIG. 27D-F: Peptides derived from the F1 DP107-like region. Peptide and CD data.

Antiviral activity (AV) is represented by the following qualitative symbols:

"-", negative antiviral activity;

"+/-", antiviral activity at greater than 100μg/ml;

"+", antiviral activity at between 50-100μg/ml;

"++", antiviral activity at between 20-50μg/ml;

"+++", antiviral activity at between 1-20μg/ml;

"++++", antiviral activity at <1μg/ml.

CD data, referring to the level of helicity is represented by the following qualitative symbol:

"-", no helicity;

"+", 25-50% helicity;

"++", 50-75% helicity;

"+++"' 75-100% helicity.

IC_{50} refers to the concentration of peptide necessary to produce only 50% of the number of syncytial relative to infected control cultures

containing no peptide. IC_{50} values were obtained using purified peptides only.

FIG. 28A-C. Respiratory Syncytial Virus (RSV) DP178-like region (F1) peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-F. IC_{50} values were obtained using purified peptides only.

FIG. 29A-E. Peptides derived from the HPIV3 F1 DP107-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-F. Purified peptides were used to obtain IC_{50} values, except where the values are marked by an asterisk (*), in which cases, the IC_{50} values were obtained using a crude peptide preparation.

FIG. 30A-C. Peptides derived from the HPIV3 F1 DP178-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-F. Purified peptides were used to obtain IC_{50} values, except where the values are marked by an asterisk (*), in which cases, the IC_{50} values were obtained using a crude peptide preparation.

FIG. 31. Motif search results for simian immunodeficiency virus (SIV) isolate MM251, enveloped polyprotein gp41. Sequence search designations are as in FIG. 20.

FIG. 32. Motif search results for Epstein-Barr Virus (Strain B95-8), glycoprotein gp110 precursor (designated gp115). BALF4. Sequence search designations are as in FIG. 20.

FIG. 33. Motif search results for Epstein-Barr Virus (Strain B95-8), BZLF1 trans-activator protein (designated EB1 or Zebra). Sequence search designations are as in FIG. 20. Additionally, "@" refers to a well known DNA binding domain and "+" refers to a well known dimerization domain, as defined

by Flemington and Speck (Flemington, E. and Speck, S.H., 1990, Proc. Natl. Acad. Sci. USA 87:9459-9463).

FIG. 34. Motif search results for measles virus (strain Edmonston), fusion glycoprotein F1. Sequence search designations are as in FIG. 20.

FIG. 35. Motif search results for Hepatitis B Virus (Subtype AYW), major surface antigen precursor S. Sequence search designations are as in FIG. 20.

FIG. 36. Motif search results for simian Mason-Pfizer monkey virus, enveloped (TM) protein gp20. Sequence search designations are as in FIG. 20.

FIG. 37. Motif search results for Pseudomonas aerginosa, fimbrial protein (Pilin). Sequence search designations are as in FIG. 20.

FIG. 38. Motif search results for Neisseria gonorrhoeae fimbrial protein (Pilin). Sequence search designations are as in FIG. 20.

FIG. 39. Motif search results for Hemophilus influenzae fimbrial protein. Sequence search designations are as in FIG. 20.

FIG. 40. Motif search results for Staphylococcus aureus, toxic shock syndrome toxin-1. Sequence search designations are as in FIG. 20.

FIG. 41. Motif search results for Staphylococcus aureus enterotoxin Type E. Sequence search designations are as in FIG. 20.

FIG. 42. Motif search results for Staphylococcus aureus enterotoxin A. Sequence search designations are as in FIG. 20.

FIG. 43. Motif search results for Escherichia coli, heat labile enterotoxin A. Sequence search designations are as in FIG. 20.

FIG. 44. Motif search results for human c-fos proto-oncoprotein. Sequence search designations are as in FIG. 20.

FIG. 45. Motif search results for human lupus KU autoantigen protein P70. Sequence search designations are as in FIG. 20.

FIG. 46. Motif search results for human zinc finger protein 10. Sequence search designations are as in FIG. 20.

FIG. 47. Measles virus (MeV) fusion protein DP178-like region antiviral and CD data. Antiviral symbols, CD symbols, and IC_{50} are as in FIG. 27A-D. IC_{50} values were obtained using purified peptides.

FIG. 48. Simian immunodeficiency virus (SIV) TM (fusion) protein DP178-like region antiviral data. Antiviral symbols are as in FIG. 27A-D "NT", not tested.

FIG. 49A-C. DP178-derived peptide antiviral data. The peptides listed herein were derived from the region surrounding the HIV-1 BRU isolate DP178 region (e.g., gp41 amino acid residues 615-717).

In instances where peptides contained DP178 point mutations, the mutated amino acid residues are shown with a shaded background. In instances in which the test peptide has had an amino and/or carboxy-terminal group added or removed (apart from the standard amido- and acetyl- blocking groups found on such peptides), such modifications are indicated. FIG. 49A: The column to the immediate right of the name of the test peptide indicates the size of the test peptide and points out whether the peptide is derived from a one amino acid peptide "walk" across the DP178 region. The next column to the right indicates whether the test peptide contains a point mutation, while the column to its right indicates whether certain amino acid residues have been added to or removed from the DP178-derived amino acid sequence. FIG 49B: The column to the immediate right of the test peptide name

indicates whether the peptide represents a DP178 truncation, the next column to the right points out whether the peptide contains a point mutation, and the column to its right indicates whether the peptide contains amino acids which have been added to or removed from the DP178 sequence itself. FIG. 49C: The column to the immediate right of the test peptide name indicates whether the test peptide contains a point mutation, while the column to its right indicates whether amino acid residues have been added to or removed from the DP178 sequence itself. IC_{50} is as defined in FIG. 27A-D, and IC_{50} values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC_{50} was obtained using a crude peptide preparation.

FIG. 50. DP107 and DP107 gp41 region truncated peptide antiviral data. IC_{50} as defined in FIG. 27A-D, and IC_{50} values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC_{50} was obtained using a crude peptide preparation.

FIG. 51A-B. Epstein-Barr virus Strain B95-8 BZLF1 DP178/DP107 analog region peptide walks and electrophoretic mobility shift assay results. The peptides (T-423 to T-446, FIG. 51A; T-447 to T-461, FIG. 51B) represent one amino acid residue "walks" through the EBV Zebra protein region from amino acid residue 173 to 246.

The amino acid residue within this region which corresponds to the first amino acid residue of each peptide is listed to the left of each peptide, while the amino acid residue within this region which corresponds to the last amino acid residue of each peptide is listed to the right of each peptide. The

length of each test peptide is listed at the far right of each line, under the heading "Res".

"ACT" refers to a test peptide's ability to inhibit Zebra binding to its response element. "+" refers to a visible, but incomplete, abrogation of the response element/Zebra homodimer complex; "+++" refers to a complete abrogation of the complex; and "-" represents a lack of complex disruption.

FIG. 52A-B. Hepatitis B virus subtype AYW major surface antigen precursor S protein DP178/DP107 analog region and peptide walks. 52A depicts Domain I (S protein amino acid residues 174-220), which contains a potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain I. 52B depicts Domain II (S protein amino acid residues 233-291), which contains a second potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain II.

5. DETAILED DESCRIPTION OF THE INVENTION

Described herein are peptides which may exhibit antifusogenic activity, antiviral capability, and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. The peptides described include, first, DP178 (SEQ ID NO:1), a gp41-derived 36 amino acid peptide and fragments and analogs of DP178.

In addition, the peptides of the invention described herein include peptides which are DP107 analogs. DP107 (SEQ ID NO:25) is a 38 amino acid peptide corresponding to residues 558 to 595 of the HIV-1_{LAI} transmembrane (TM) gp41 protein. Such DP107 analogs may exhibit antifusogenic capability, antiviral activity or an ability to modulate

intracellular processes involving coiled-coil structures.

Further, peptides of the invention include DP107 and DP178 are described herein having amino acid sequences recognized by the 107x178x4, ALLMOTI5, and PLZIP search motifs. Such motifs are also discussed.

Also described here are antifusogenic, antiviral, intracellular modulatory, and diagnostic uses of the peptides of the invention. Further, procedures are described for the use of the peptides of the invention for the identification of compounds exhibiting antifusogenic, antiviral or intracellular modulatory activity.

While not limited to any theory of operation, the following model is proposed to explain the potent anti-HIV activity of DP178, based, in part, on the experiments described in the Examples, infra. In the HIV protein, gp41, DP178 corresponds to a putative α-helix region located in the C-terminal end of the gp41 ectodomain, and appears to associate with a distal site on gp41 whose interactive structure is influenced by the leucine zipper motif, a coiled-coil structure, referred to as DP107. The association of these two domains may reflect a molecular linkage or "molecular clasp" intimately involved in the fusion process. It is of interest that mutations in the C-terminal α-helix motif of gp41 (i.e., the D178 domain) tend to enhance the fusion ability of gp41, whereas mutations in the leucine zipper region (i.e., the DP107 domain) decrease or abolish the fusion ability of the viral protein. It may be that the leucine zipper motif is involved in membrane fusion while the C-terminal α-helix motif serves as a molecular safety to regulate the availability of the leucine zipper during virus-induced membrane fusion.

On the basis of the foregoing, two models are proposed of gp41-mediated membrane fusion which are schematically shown in FIG. 11A-B. The reason for proposing two models is that the temporal nature of the interaction between the regions defined by DP107 and DP178 cannot, as yet, be pinpointed. Each model envisions two conformations for gp41 - one in a "native" state as it might be found on a resting virion. The other in a "fusogenic" state to reflect conformational changes triggered following binding of gp120 to CD4 and just prior to fusion with the target cell membrane. The strong binding affinity between gp120 and CD4 may actually represent the trigger for the fusion process obviating the need for a pH change such as occurs for viruses that fuse within intracellular vesicles. The two major features of both models are: (1) the leucine zipper sequences (DP107) in each chain of oligomeric enveloped are held apart in the native state and are only allowed access to one another in the fusogenic state so as to form the extremely stable coiled-coils, and (2) association of the DP178 and DP107 sites as they exist in gp41 occur either in the native or fusogenic state. FIG. 11A depicts DP178/DP107 interaction in the native state as a molecular clasp. On the other hand, if one assumes that the most stable form of the enveloped occurs in the fusogenic state, the model in FIG. 11B can be considered.

When synthesized as peptides, both DP107 and DP178 are potent inhibitors of HIV infection and fusion, probably by virtue of their ability to form complexes with viral gp41 and interfere with its fusogenic process; e.g., during the structural transition of the viral protein from the native structure to the fusogenic state, the DP178 and DP107

peptides may gain access to their respective binding sites on the viral gp41, and exert a disruptive influence. DP107 peptides which demonstrate anti-HIV activity are described in Applicants' co-pending application Serial No. 08/264,531, filed June 23, 1994, which is incorporated by reference herein in its entirety.

As shown in the Examples, infra, a truncated recombinant gp41 protein corresponding to the ectodomain of gp41 containing both DP107 and DP178 domains (excluding the fusion peptide, transmembrane region and cytoplasmic domain of gp41) did not inhibit HIV-1 induced fusion. However, when a single mutation was introduced to disrupt the coiled-coil structure of the DP107 domain -- a mutation which results in a total loss of biological activity of DP107 peptides -- the inactive recombinant protein was transformed to an active inhibitor of HIV-1 induced fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107 domain.

For clarity of discussion, the invention will be described primarily for DP178 peptide inhibitors of HIV. However, the principles may be analogously applied to other viruses, both enveloped and nonenveloped, and to other non-viral organisms.

5.1. DP178 AND DP178-LIKE PEPTIDES

The DP178 peptide (SEQ ID:1) of the invention corresponds to amino acid residues 638 to 673 of the transmembrane protein gp41 from the HIV-1_{LAI} isolate, and has the 36 amino acid sequence (reading from amino to carboxy terminus):

NH_2-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-COOH (SEQ ID:1)

In addition to the full-length DP178 (SEQ ID:1) 36-mer, the peptides of the invention may include truncations of the DP178 (SEQ ID:1) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. Truncations of DP178 (SEQ ID:1) peptides may comprise peptides of between 3 and 36 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 36-mer polypeptide), as shown in Tables I and IA, below. Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE I
DP178 (SEQ ID:1) CARBOXY TRUNCATIONS

X-YTS-Z
X-YTSL-Z
X-YTSLI-Z
X-YTSLIH-Z
X-YTSLIHS-Z
X-YTSLIHSL-Z
X-YTSLIHSLI-Z
X-YTSLIHSLIE-Z
X-YTSLIHSLIEE-Z
X-YTSLIHSLIEES-Z
X-YTSLIHSLIEESQ-Z
X-YTSLIHSLIEESQN-Z
X-YTSLIHSLIEESQNQ-Z
X-YTSLIHSLIEESQNQQ-Z
X-YTSLIHSLIEESQNQQE-Z
X-YTSLIHSLIEESQNQQEK-Z
X-YTSLIHSLIEESQNQQEKN-Z
X-YTSLIHSLIEESQNQQEKNE-Z
X-YTSLIHSLIEESQNQQEKNEQ-Z
X-YTSLIHSLIEESQNQQEKNEQE-Z
X-YTSLIHSLIEESQNQQEKNEQEL-Z
X-YTSLIHSLIEESQNQQEKNEQELL-Z
X-YTSLIHSLIEESQNQQEKNEQELLE-Z
X-YTSLIHSLIEESQNQQEKNEQELLEL-Z
X-YTSLIHSLIEESQNQQEKNEQELLELD-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDK-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWA-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWAS-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASL-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWN-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNW-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IA
DP178 (SEQ ID:1) AMINO TRUNCATIONS

X-NWF-Z
X-WNWF-Z
X-LWNWF-Z
X-SLWNWF-Z
X-ASLWNWF-Z
X-WASLWNWF-Z
X-KWASLWNWF-Z
X-DKWASLWNWF-Z
X-LDKWASLWNWF-Z
X-ELDKWASLWNWF-Z
X-LELDKWASLWNWF-Z
X-LLELDKWASLWNWF-Z
X-ELLELDKWASLWNWF-Z
X-QELLELDKWASLWNWF-Z
X-EQELLELDKWASLWNWF-Z
X-NEQELLELDKWASLWNWF-Z
X-KNEQELLELDKWASLWNWF-Z
X-EKNEQELLELDKWASLWNWF-Z
X-QEKNEQELLELDKWASLWNWF-Z
X-QQEKNEQELLELDKWASLWNWF-Z
X-NQQEKNEQELLELDKWASLWNWF-Z
X-QNQQEKNEQELLELDKWASLWNWF-Z
X-SQNQQEKNEQELLELDKWASLWNWF-Z
X-ESQNQQEKNEQELLELDKWASLWNWF-Z
X-EESQNQQEKNEQELLELDKWASLWNWF-Z
X-IEESQNQQEKNEQELLELDKWASLWNWF-Z
X-LIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-SLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-HSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-IHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

The peptides of the invention also include DP178-like peptides. "DP178-like", as used herein, refers, first, to DP178 and DP178 truncations which contain one or more amino acid substitutions, insertions and/or deletions. Second, "DP-178-like" refers to peptide sequences identified or recognized by the ALLMOTI5, 107x178x4 and PLZIP search motifs described herein, having structural and/or amino acid motif similarity to DP178. The DP178-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP178-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP178-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP178 peptides of the invention. Utilizing the DP178 and DP178 analog sequences described herein, the skilled artisan can readily compile DP178 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids of similar charge, size, and/or

hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids possessing dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

Amino acid insertions may consist of single amino acid residues or stretches of residues. The insertions may be made at the carboxy or amino terminal end of the DP178 or DP178 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred. One or more such insertions may be introduced into DP178 (SEQ.ID:1) or DP178 truncations, as long as such insertions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP178 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP178 region of the gp41 protein.

Deletions of DP178 (SEQ ID:1) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP178 or DP178-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences. One or more such deletions may be introduced into DP178 (SEQ.ID:1) or DP178 truncations, as long as such deletions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

DP178 analogs are further described, below, in Section 5.3.

5.2. DP107 AND DP107-LIKE PEPTIDES

Further, the peptides of the invention include peptides having amino acid sequences corresponding to DP107 analogs. DP107 is a 38 amino acid peptide which exhibits potent antiviral activity, and corresponds to residues 558 to 595 of HIV-1_{LAI} transmembrane (TM) gp41 protein, as shown here:

NH_2-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-COOH
(SEQ ID:25)

In addition to the full-length DP107 (SEQ ID:25) 38-mer, the peptides of the invention may include truncations of the DP107 (SEQ ID:25) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes

involving coiled-coil peptide structures. Truncations of DP107 (SEQ ID:25) peptides may comprise peptides of between 3 and 38 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 38-mer polypeptide), as shown in Tables II and IIA, below. Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE II
DP107 (SEQ ID:25) CARBOXY TRUNCATIONS

X-NNL-Z
X-NNLL-Z
X-NNLLR-Z
X-NNLLRA-Z
X-NNLLRAI-Z
X-NNLLRAIE-Z
X-NNLLRAIEA-Z
X-NNLLRAIEAQ-Z
X-NNLLRAIEAQQ-Z
X-NNLLRAIEAQQH-Z
X-NNLLRAIEAQQHL-Z
X-NNLLRAIEAQQHLL-Z
X-NNLLRAIEAQQHLLQ-Z
X-NNLLRAIEAQQHLLQL-Z
X-NNLLRAIEAQQHLLQLT-Z
X-NNLLRAIEAQQHLLQLTV-Z
X-NNLLRAIEAQQHLLQLTVW-Z
X-NNLLRAIEAQQHLLQLTVWQ-Z
X-NNLLRAIEAQQHLLQLTVWQI-Z
X-NNLLRAIEAQQHLLQLTVWQIK-Z
X-NNLLRAIEAQQHLLQLTVWQIKQ-Z
X-NNLLRAIEAQQHLLQLTVWQIKQL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQ-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQA-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQAR-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARI-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARIL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILA-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAV-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVE-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVER-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERY-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYL-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLK-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKD-Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IIA
DP178 (SEQ ID:25) AMINO TRUNCATIONS

X-KDQ- Z
X-LKDQ- Z
X-YLKDQ- Z
X-RYLKDQ- Z
X-ERYLKDQ- Z
X-VERYLKDQ- Z
X-AVERYLKDQ- Z
X-LAVERYLKDQ- Z
X-ILAVERYLKDQ- Z
X-RILAVERYLKDQ- Z
X-ARILAVERYLKDQ- Z
X-QARILAVERYLKDQ- Z
X-LQARILAVERYLKDQ- Z
X-QLQARILAVERYLKDQ- Z
X-KQLQARILAVERYLKDQ- Z
X-IKQLQARILAVERYLKDQ- Z
X-QIKQLQARILAVERYLKDQ- Z
X-WQIKQLQARILAVERYLKDQ- Z
X-VWQIKQLQARILAVERYLKDQ- Z
X-TVWQIKQLQARILAVERYLKDQ- Z
X-LTVWQIKQLQARILAVERYLKDQ- Z
X-QLTVWQIKQLQARILAVERYLKDQ- Z
X-LQLTVWQIKQLQARILAVERYLKDQ- Z
X-LLQLTVWQIKQLQARILAVERYLKDQ- Z
X-HLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-QHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-QQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-AQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-EAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-IEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-AIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-RAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-LRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-LLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-NLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z
X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ- Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

The peptides of the invention also include DP107-like peptides. "DP107-like", as used herein, refers, first, to DP107 and DP107 truncations which contain one or more amino acid substitutions, insertions and/or deletions. Second, "DP-107-like" refers to peptide sequences identified or recognized by the ALLMOTI5, 107x178x4 and PLZIP search motifs described herein, having structural and/or amino acid motif similarity to DP107. The DP107-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP107-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP107-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP107 peptides of the invention. Utilizing the DP107 and DP107 analog sequences described herein, the skilled artisan can readily compile DP107 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids of similar charge, size, and/or

hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids possessing dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

Amino acid insertions may consist of single amino acid residues or stretches of residues. The insertions may be made at the carboxy or amino terminal end of the DP107 or DP107 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred. One or more such insertions may be introduced into DP107 (SEQ.ID:25) or DP107 truncations, as long as such insertions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP107 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP107 region of the gp41 protein.

Deletions of DP107 (SEQ ID:25) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP107 or DP107-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences. One or more such deletions may be introduced into DP107 (SEQ.ID:25) or DP107 truncations, as long as such deletions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

DP107 and DP107 truncations are more fully described in Applicants' co-pending U.S. Patent Application Ser. No. 08/374,666, filed January 27, 1995, and which is incorporated herein by reference in its entirety. DP107 analogs are further described, below, in Section 5.3.

5.3. DP107 and DP178 ANALOGS

Peptides corresponding to analogs of the DP178, DP178 truncations, DP107 and DP107 truncation sequences of the invention, described, above, in Sections 5.1 and 5.2 may be found in other viruses, including, for example, non-HIV-1_{LAI} enveloped viruses, non-enveloped viruses and other non-viral organisms.

The term "analog", as used herein, refers to a peptide which is recognized or identified via the 107x178x4, ALLMOTI5 and/or PLZIP search strategies discussed below. Further, such peptides may exhibit antifusogenic capability, antiviral activity, or the

ability to modulate intracellular processes involving coiled-coil structures.

Such DP178 and DP107 analogs may, for example, correspond to peptide sequences present in TM proteins of enveloped viruses and may, additionally correspond to peptide sequences present in non enveloped and non-viral organisms. Such peptides may exhibit antifusogenic activity, antiviral activity, most particularly antiviral activity which is specific to the virus in which their native sequences are found, or may exhibit an ability to modulate intracellular processes involving coiled-coil peptide structures.

DP178 analogs are peptides whose amino acid sequences are comprised of the amino acid sequences of peptide regions of, for example, other (i.e., other than HIV-1_{LAI}) viruses that correspond to the gp41 peptide region from which DP178 (SEQ ID:1) was derived. Such viruses may include, but are not limited to, other HIV-1 isolates and HIV-2 isolates. DP178 analogs derived from the corresponding gp41 peptide region of other (i.e., non HIV-1_{LAI}) HIV-1 isolates may include, for example, peptide sequences as shown below.

NH_2-YTNTIYTLLEESQNQQEKNEQELLELDKWASLWNWF-COOH (DP-185; SEQ ID:3);

NH_2-YTGIIYNLLEESQNQQEKNEQELLELDKWANLWNWF-COOH (SEQ ID:4);

NH_2-YTSLIYSLLEKSQIQQEKNEQELLELDKWASLWNWF-COOH (SEQ ID:5).

SEQ ID:3 (DP-185), SEQ ID:4, and SEQ ID:5 are derived from HIV-1_{SF2}, HIV-1_{RF}, and HIV-1_{MN} isolates, respectively. Underlined amino acid residues refer to those residues that differ from the corresponding position in the DP178 (SEQ ID:1) peptide. One such

DP178 analog, DP-185 (SEQ ID:3), is described in the Example presented in Section 6, below, where it is demonstrated that DP-185 (SEQ ID:3) exhibits antiviral activity. The DP178 analogs of the invention may also include truncations, as described above. Further, the analogs of the invention modifications such those described for DP178 analogs in Section 5.1., above. It is preferred that the DP178 analogs of the invention represent peptides whose amino acid sequences correspond to the DP178 region of the gp41 protein, it is also contemplated that the peptides of the invention may, additionally, include amino sequences, ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP178 amino acid sequence.

Striking similarities, as shown in FIG. 1, exist within the regions of HIV-1 and HIV-2 isolates which correspond to the DP178 sequence. A DP178 analog derived from the HIV-2_{NIHZ} isolate has the 36 amino acid sequence (reading from amino to carboxy terminus):

NH_2-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-COOH (SEQ ID:7)

Table III and Table IV show some possible truncations of the HIV-2_{NIHZ} DP178 analog, which may comprise peptides of between 3 and 36 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 36-mer polypeptide). Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; or a

covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

TABLE III

HIV-2_{NIHZ} DP178 analog carboxy truncations.

X-LEA-Z
X-LEAN-Z
X-LEANI-Z
X-LEANIS-Z
X-LEANISQ-Z
X-LEANISQS-Z
X-LEANISQSL-Z
X-LEANISQSLE-Z
X-LEANISQSLEQ-Z
X-LEANISQSLEQA-Z
X-LEANISQSLEQAQ-Z
X-LEANISQSLEQAQI-Z
X-LEANISQSLEQAQIQ-Z
X-LEANISQSLEQAQIQQ-Z
X-LEANISQSLEQAQIQQE-Z
X-LEANISQSLEQAQIQQEK-Z
X-LEANISQSLEQAQIQQEKN-Z
X-LEANISQSLEQAQIQQEKNM-Z
X-LEANISQSLEQAQIQQEKNMY-Z
X-LEANISQSLEQAQIQQEKNMYE-Z
X-LEANISQSLEQAQIQQEKNMYEL-Z
X-LEANISQSLEQAQIQQEKNMYELQ-Z
X-LEANISQSLEQAQIQQEKNMYELQK-Z
X-LEANISQSLEQAQIQQEKNMYELQKL-Z
X-LEANISQSLEQAQIQQEKNMYELQKLN-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNS-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSW-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWD-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDV-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVF-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFT-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTN-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNW-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IV

HIV-2_{NIH-Z} DP178 analog amino truncations.

X-NWL-Z
X-TNWL-Z
X-FTNWL-Z
X-VFTNWL-Z
X-DVFTNWL-Z
X-WDVFTNWL-Z
X-SWDVFTNWL-Z
X-NSWDVFTNWL-Z
X-LNSWDVFTNWL-Z
X-KLNSWDVFTNWL-Z
X-QKLNSWDVFTNWL-Z
X-LQKLNSWDVFTNWL-Z
X-ELQKLNSWDVFTNWL-Z
X-YELQKLNSWDVFTNWL-Z
X-MYELQKLNSWDVFTNWL-Z
X-NMYELQKLNSWDVFTNWL-Z
X-KNMYELQKLNSWDVFTNWL-Z
X-EKNMYELQKLNSWDVFTNWL-Z
X-QEKNMYELQKLNSWDVFTNWL-Z
X-QQEKNMYELQKLNSWDVFTNWL-Z
X-IQQEKNMYELQKLNSWDVFTNWL-Z
X-QIQQEKNMYELQKLNSWDVFTNWL-Z
X-AQIQQEKNMYELQKLNSWDVFTNWL-Z
X-QAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-EQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-LEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-SLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-QSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-SQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-ISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-NISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-ANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-EANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

DP178 and DP107 analogs are recognized or identified, for example, by utilizing one or more of the 107x178x4, ALLMOTI5 or PLZIP computer-assisted search strategies described and demonstrated, below, in the Examples presented in Sections 9 through 16 and 19 through 25. The search strategy identifies additional peptide regions which are predicted to have structural and/or amino acid sequence features similar to those of DP107 and/or DP178.

The search strategies are described fully, below, in the Example presented in Section 9. While this search strategy is based, in part, on a primary amino acid motif deduced from DP107 and DP178, it is not based solely on searching for primary amino acid sequence homologies, as such protein sequence homologies exist within, but not between major groups of viruses. For example, primary amino acid sequence homology is high within the TM protein of different strains of HIV-1 or within the TM protein of different isolates of simian immunodeficiency virus (SIV). Primary amino acid sequence homology between HIV-1 and SIV, however, is low enough so as not to be useful. It is not possible, therefore, to find peptide regions similar to DP107 or DP178 within other viruses, or within non-viral organisms, whether structurally, or otherwise, based on primary sequence homology, alone.

Further, while it would be potentially useful to identify primary sequence arrangements of amino acids based on, for example, the physical chemical characteristics of different classes of amino acids rather than based on the specific amino acids themselves, such search strategies have, until now, proven inadequate. For example, a computer algorithm designed by Lupas et al. to identify coiled-coil propensities of regions within proteins (Lupas, A., et al., 1991 Science 252:1162-1164) is inadequate for

identifying protein regions analogous to DP107 or DP178.

Specifically, analysis of HIV-1 gp160 (containing both gp120 and gp41) using the Lupas algorithm does not identify the coiled-coil region within DP107. It does, however, identify a region within DP178 beginning eight amino acids N-terminal to the start of DP178 and ending eight amino acids from the C-terminus. The DP107 peptide has been shown experimentally to form a stable coiled coil. A search based on the Lupas search algorithm, therefore, would not have identified the DP107 coiled-coil region. Conversely, the Lupas algorithm identified the DP178 region as a potential coiled-coil motif. However, the peptide derived from the DP178 region failed to form a coiled coil in solution.

A possible explanation for the inability of the Lupas search algorithm to accurately identify coiled-coil sequences within the HIV-1 TM, is that the Lupas algorithm is based on the structure of coiled coils from proteins that are not structurally or functionally similar to the TM proteins of viruses, antiviral peptides (e.g. DP107 and DP178) of which are an object of this invention.

The computer search strategy of the invention, as demonstrated in the Examples presented below, in Sections 9 through 16 and 19 through 25, successfully identifies regions of proteins similar to DP107 or DP178. This search strategy was designed to be used with a commercially-available sequence database package, preferably PC/Gene.

A series of search motifs, the 107x178x4, ALLMOTI5 and PLZIP motifs, were designed and engineered to range in stringency from strict to broad, as discussed in this Section and in Section 9, with 107x178x4 being preferred. The sequences

identified via such search motifs, such as those listed in Tables V-XIV, below, potentially exhibit antifusogenic, such as antiviral, activity, may additionally be useful in the identification of antifusogenic, such as antiviral, compounds, and are intended to be within the scope of the invention.

Coiled-coiled sequences are thought to consist of heptad amino acid repeats. For ease of description, the amino acid positions within the heptad repeats are sometimes referred to as A through G, with the first position being A, the second B, etc. The motifs used to identify DP107-like and DP178-like sequences herein are designed to specifically search for and identify such heptad repeats. In the descriptions of each of the motifs described, below, amino acids enclosed by brackets , i.e., [], designate the only amino acid residues that are acceptable at the given position, while amino acids enclosed by braces, i.e., {}, designate the only amino acids which are unacceptable at the given heptad position. When a set of bracketed or braced amino acids is followed by a number in parentheses i.e., (), it refers to the number of subsequent amino acid positions for which the designated set of amino acids hold, e.g, a (2) means "for the next two heptad amino acid positions".

The ALLMOTI5 is written as follows:

{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-
{CDGHP}-{CFP}(2)-{CDGHP}-{CFP}(3)-

Translating this motif, it would read: "at the first (A) position of the heptad, any amino acid residue except C, D, G, H, or P is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, or P is acceptable, at the fourth heptad position (D), any amino acid residue except C,

D, G, H, or P is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, or P is acceptable. This motif is designed to search for five consecutive heptad repeats (thus the repeat of the first line five times), meaning that it searches for 35-mer sized peptides. It may also be designed to search for 28-mers, by only repeating the initial motif four times. With respect to the ALLMOTI5 motif, a 35-mer search is preferred. Those viral (non-bacteriophage) sequences identified via such an ALLMOTI5 motif are listed in Table V, below, at the end of this Section. The viral sequences listed in Table V potentially exhibit antiviral activity, may be useful in the the identification of antiviral compounds, and are intended to be within the scope of the invention. In those instances wherein a single gene exhibits greater than one sequence recognized by the ALLMOTI5 search motif, the amino a cid residue numbers of these sequences are listed under "Area 2", Area 3", etc. This convention is used for each of the Tables listed, below, at the end of this Section.

The 107x178x4 motif is written as follows:

[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-
[EFIKLNQSTVWY]-{CFMP}(2)-[EFIKLNQSTVWY]-{CFMP}(3)-

Translating this motif, it would read: "at the first (A) position of the heptad, only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, M or P is acceptable, at the fourth position (D), only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, M or P is acceptable. This motif is designed to search for

four consecutive heptad repeats (thus the repeat of the first line four times), meaning that it searches for 28-mer sized peptides. It may also be designed to search for 35-mers, by repeating the initial motif five times. With respect to the 107x178x4 motif, a 28-mer search is preferred.

Those viral (non-bacteriophage) sequences identified via such a 107x178x4 motif are listed in Table VI, below, at the end of this Section, with those viral (non-bacteriophage) sequences listed in Table VII, below at the end of this Section, being preferred.

The 107x178x4 search motif was also utilized to identify non-viral procaryotic protein sequences, as listed in Table VIII, below, at the end of this Section. Further, this search motif was used to reveal a number of human proteins. The results of this human protein 107x178x4 search is listed in Table IX, below, at the end of this Section. The sequences listed in Tables VIII and IX, therefore, reveal peptides which may be useful as antifusogenic compounds or in the identification of antifusogenic compounds, and are intended to be within the scope of the invention.

The PLZIP series of motifs are as listed in FIG. 19. These motifs are designed to identify leucine zipper coiled-coil like heptads wherein at least one proline residue is present at some predefined distance N-terminal to the repeat. These PLZIP motifs find regions of proteins with similarities to HIV-1 DP178 generally located just N-terminal to the transmembrane anchor. These motifs may be translated according to the same convention described above. Each line depicted in FIG. 19 represents a single, complete search motif. "X" in these motifs refers to any amino acid residue. In instances wherein a motif contains

two numbers within parentheses, this refers to a variable number of amino acid residues. For example, X (1,12) is translated to "the next one to twelve amino acid residues, inclusive, may be any amino acid".

Tables X through XIV, below, at the end of this Section, list sequences identified via searches conducted with such PLZIP motifs. Specifically, Table X lists viral sequences identified via PCTLZIP, P1CTLZIP and P2CTLZIP search motifs, Table XI lists viral sequences identified via P3CTLZIP, P4CTLZIP, P5CTLZIP and P6CTLZIP search motifs, Table XII lsts viral sequences identified via P7CTLZIP, P8CTLZIP and P9CTLZIP search motifs, Table XIII lists viral sequences identified via P12LZIPC searches and Table XIV lists viral sequences identified via P23TLZIPC search motifs The viral sequences listed in these tables represent peptides which potentially exhibit antiviral activity, may be useful in the identification of antiviral compounds, and are intended to be within the scope of the invention.

The Examples presented in Sections 17, 18, 26 and 27 below, demonstrate that viral sequences identified via the motif searches described herein identify substantial antiviral characteristics. Specifically, the Example presented in Section 17 describes peptides with anti-respiratory syncytial virus activity, the Example presented in Section 18 describes peptides with anti-parainfluenza virus activity, the Example presented in Section 26 describes peptides with anti-measles virus activity and the Example presented in Section 27 describes peptides with anti-simian immunodeficiency virus activity.

The DP107 and DP178 analogs may, further, contain any of the additional groups described for DP178, above, in Section 5.1. For example, these peptides

may include any of the additional amino-terminal groups as described above for "X" groups, and may also include any of the carboxy-terminal groups as described, above, for "Z" groups.

Additionally, truncations of the identified DP107 and DP178 peptides are among the peptides of the invention. Further, such DP107 and DP178 analogs and DP107/DP178 analog truncations may exhibit one or more amino acid substitutions, insertion, and/or deletions. The DP178 analog amino acid substitutions, insertions and deletions, are as described, above, for DP178-like peptides in Section 5.1. The DP-107 analog amino acid substitutions, insertions and deletions are also as described, above, for DP107-like peptides in Section 5.2.

Tables XV through XXII, below, present representative examples of such DP107/DP178 truncations. Specifically, Table XV presents Respiratory Syncytial Virus F1 region DP107 analog carboxy truncations, Table XVI presents Respiratory Syncytial Virus F1 region DP107 analog amino truncations, Table XVII presents Respiratory Syncytial Virus F1 region DP178 analog carboxy truncations, Table XVIII presents Respiratory Syncytial Virus F1 region DP178 analog amino truncations, Table XIX presents Human Parainfluenza Virus 3 F1 region DP178 analog carboxy truncations, Table XX presents Human Parainfluenza Virus 3 F1 region DP178 analog amino truncations, Table XXI presents Human Parainfluenza Virus 3 F1 region DP107 analog carboxy truncations and Table XXII presents Human Parainfluenza Virus 3 F1 region DP107 analog amino truncations. Further, Table XXIII, below, presents DP107/DP178 analogs and analog truncations which exhibit substantial antiviral activity. These antiviral peptides are grouped according to the specific virus which they inhibit,

including respiratory syncytial virus, human parainfluenza virus 3, simian immunodeficiency virus and measles virus.

TABLE V

ALLMOTIS SEARCH RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
P190K_TRVPS	POTENTIAL 190 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	113-151							
P194K_TRVSY	POTENTIAL 194 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	144-178	214-248	391-446	644-678	1045-1079	1135-1176	1135-1176	1615-1649
P55KD_HSV6U	55.8 KD PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	228-262							
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	3-48	100-144						
PAANT_HDVD3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE D380)	7-48	100-144						
PAANT_HDVIT	DELTA ANTIGEN (ALPHA ANTIGEN)	HEPATITIS DELTA VIRUS (ISOLATE ITALIAN)	3-48	100-144						
PAANT_HDVL1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE LEBANON-1)	3-48							
PAANT_HDVM1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE M-1)	3-48	100-144						
PAANT_HDVM2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE M-2)	3-48	100-144						
PAANT_HDVNA	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE NAURU)	3-48	100-144						
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE S-1)	1-49	100-144						
PAANT_HDVS2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE JAPANESE S-2)	1-49	100-144						
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE WOODCHUCK)	3-48	100-144						
PATIH_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438)	71-110							
PATII_VACCV	94 KD A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	14-57	420-564	570-625					
PATII_VARV	81 KD A-TYPE INCLUSION PROTEIN	VARIOLA VIRUS	425-525	531-565	571-628					
PATI2_HSV11	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	304-345							
PATI2_HSV1F	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	102-139	304-345						
PATI2_HSVEB	ALPHA TRANS-INDUCING FACTOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-147	268-331						
PATI2_VACCC	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	79-124	219-263						
PATI2_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	79-124							
PATI2_VZVD	ALPHA TRANS-INDUCING FACTOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	298-361	395-429						
PATIJ_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	51-95							
PATIN_HSV23	ALPHA TRANS-INDUCING PROTEIN (VMW65)	HERPES SIMPLEX VIRUS (TYPE 2)	178-219	324-381						
PATIN_HSV2H	ALPHA TRANS-INDUCING PROTEIN (VMW65)	HERPES SIMPLEX VIRUS (TYPE 2)	177-222	324-381						
PATIN_HSVBP	ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1	195-236							
PATIN_HSVEB	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1	241-289							
PATIN_VZVD	ALPHA TRANS-INDUCING PROTEIN (	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	206-252							
PATI_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-57	425-526	532-566	572-629	803-089	1106-1150		
PBDL2_EBV	PROTEIN BDLF2	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-131							
PBRL1_EBV	TRANSCRIPTION ACTIVATOR BRLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-187							
PCOA1_POVBA	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141							
PCOA1_POVBK	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141							
PCOA1_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	159-195							
PCOA1_SV40	COAT PROTEIN VP1	SIMIAN VIRUS 40	109-143							
PCOA2_BFDV	COAT PROTEIN VP2	BUDGERIGAR FLEDGLING DISEASE VIRUS	141-213							
PCOA2_POVBA	COAT PROTEIN VP2	POLYOMAVIRUS BK (STRAIN AS)	14-64	317-351						
PCOA2_POVBK	COAT PROTEIN VP2	POLYOMAVIRUS BK	14-64	317-351						
PCOA2_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	35-76	153-216						
PCOA2_POVHA	COAT PROTEIN VP2	HAMSTER POLYOMAVIRUS	7-48	174-208						
PCOA2_POVJC	COAT PROTEIN VP2	POLYOMAVIRUS JC	14-64	233-267						
PCOA2_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	14-78	156-206						
PCOA2_POVMJ	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN 3)	5-72	137-185						
PCOA2_POVMA	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-185						
PCOA2_POVMC	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-185						
PCOA2_POVMK	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	15-56	177-211						
PCOA2_SV40	COAT PROTEIN VP2	SIMIAN VIRUS 40	14-62	228-262	318-352					
PCOAT_ABMVW	COAT PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA	180-214							
PCOAT_ACLSV	COAT PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	154-188							
PCOAT_AEDEV	COAT PROTEIN VP1	AEDES DENSONUCLEOSIS VIRUS	243-284							
PCOAT_AMCV	COAT PROTEIN	ARTICHOKE MOTTLED CRINKLE VIRUS	36-70	100-134						
PCOAT_BLRV	COAT PROTEIN	BEAN LEAFROLL VIRUS	89-123							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	36-73							
PCOAT_BMV	COAT PROTEIN	BROME MOSAIC VIRUS	163-197							
PCOAT_BYDV1	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	163-197							
PCOAT_BYDVM	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_BYDVP	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_BYDVR	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN	56-90	186-223						
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	186-223						
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	185-222						
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CAMVS	COAT PROTEIN	CARNATION MOTTLE VIRUS	13-51							
PCOAT_CARMV	COAT PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	141-178							
PCOAT_COMV	COAT PROTEIN	CARNATION ETCHED RING VIRUS	192-226							
PCOAT_CERV	PROBABLE COAT PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	393-435							
PCOAT_CHVP1	MAJOR CAPSID PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CLVK	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CLVN	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVFC	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVI	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVP6	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVQ	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVWL	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CMVY	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	328-365							
PCOAT_CNV	COAT PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	184-218							
PCOAT_CSMV	COAT PROTEIN	CITRUS TRISTEZA VIRUS	79-120							
PCOAT_CTV36	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	162-204							
PCOAT_CYMV	COAT PROTEIN	EGGPLANT MOSAIC VIRUS	40-74							
PCOAT_EPMV	COAT PROTEIN	FELINE CALICIVIRUS	432-466	566-600						
PCOAT_FCVC6	COAT PROTEIN	FELINE CALICIVIRUS	502-550	566-600						
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS	519-553	569-603						
PCOAT_FCVF9	COAT PROTEIN	FIGWORT MOSAIC VIRUS	144-199	206-247	449-483					
PCOAT_FMVD	PROBABLE COAT PROTEIN	FOXTAIL MOSAIC VIRUS	168-220							
PCOAT_FXMV	COAT PROTEIN	TIPULA IRIDESCENT VIRUS	90-124							
PCOAT_IRV1	CAPSID PROTEIN	SIMULIUM IRIDESCENT VIRUS	90-124							
PCOAT_IRV22	CAPSID PROTEIN	CHILO IRIDESCENT VIRUS	51-85							
PCOAT_IRV6	CAPSID PROTEIN	LILY SYMPTOMLESS VIRUS	32-70	255-289						
PCOAT_LSV	COAT PROTEIN	MAIZE STRIPE VIRUS	7-76	84-121						
PCOAT_MSTV	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVK	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVN	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVS	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	105-139							
PCOAT_ORSV	COAT PROTEIN	BOVINE PARVOVIRUS	380-414	444-480						
PCOAT_PAVBO	COAT PROTEIN VP2	CANINE PARVOVIRUS	497-531							
PCOAT_PAVC7	COAT PROTEIN VP1	PEA EARLY BROWNING VIRUS	73-114							
PCOAT_PEBV	COAT PROTEIN	POPLAR MOSAIC VIRUS	36-81							
PCOAT_POPMV	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS	104-138							
PCOAT_PPMVS	COAT PROTEIN	POTATO VIRUS	38-72	251-292						
PCOAT_PVSP	COAT PROTEIN	POTATO YELLOW MOSAIC VIRUS	190-224							
PCOAT_PYMVV	COAT PROTEIN	RASPBERRY BUSHY DWARF VIRUS	10-44	140-199						
PCOAT_RBDV	COAT PROTEIN	RED CLOVER NECROTIC MOSAIC VIRUS	272-306							
PCOAT_RCNMV	COAT PROTEIN	RICE STRIPE VIRUS	34-68	83-120	239-309					
PCOAT_RSV	COAT PROTEIN	SQUASH LEAF CURL VIRUS	190-224							
PCOAT_SLCV	COAT PROTEIN									

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PCOAT_SMWLM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	66-100							
PCOAT_SOCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-166							
PCOAT_STNV1	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 1	2-50							
PCOAT_STNV2	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 2	38-72							
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	7-55							
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMY VIRUS	14-48							
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	1-37	43-77						
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	44-78	100-134						
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	12-46							
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	186-220							
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	103-137							
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMV06	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	76-138							
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TRVCA	COAT PROTEIN	TOBACCO RATTLE VIRUS	71-109							
PCOAT_TRVTC	COAT PROTEIN	TOBACCO RATTLE VIRUS	69-103							
PCOAT_TYDVA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS	2-36							
PCOAT_TYMV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_TYMVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_WCMVO	COAT PROTEIN	WHITE CLOVER MOSAIC VIRUS	163-197							
PCORA_HPBGS	CORE ANTIGEN	GROUND SQUIRREL HEPATITIS VIRUS	94-135							
PCORA_HPBV9	CORE ANTIGEN	HEPATITIS B VIRUS	111-149							
PCORA_WHV1	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 1	62-106							
PCORA_WHV8	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 8	62-106							
PD250_ASFB7	PROTEIN D250R	AFRICAN SWINE FEVER VIRUS	198-232							
PDNB2_ADE02	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	291-336							
PDNB2_ADE05	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 5	291-336							
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS	215-252	718-752	974-1009	1027-1068				
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS	338-372	1013-1050						
PDNBI_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNBI_HSVB1	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2	552-591	599-633	1048-1131					
PDNBI_HSVE1	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1	273-314							
PDNBI_HSVEB	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1	617-658	1107-1148						
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI	222-259	330-367	506-557	873-907				
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS	584-618	987-1125						
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS	525-562							
PDNBI_VZVD	MAJOR DNA-BINDING PROTEIN	VARICELLA-ZOSTER VIRUS	613-650	1041-1077						
PDNLI_ASFM2	DNA LIGASE	AFRICAN SWINE FEVER VIRUS	72-106							
PDNLI_VACCC	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNLI_VACCV	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNLI_VARV	DNA LIGASE	VARIOLA VIRUS	395-436							
PDPOL_ADE02	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	667-743							
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	667-743							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	733-809							

BAD ORIGINAL

ACCESSION	ALLMOTIFS	AP Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
DNAPOLYMERASE	DNA POLYMERASE	VIRUS	665-741						
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	23-64	202-240					
PDPOL_CIDV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPOX VIRUS	247-284						
PDPOL_CHV2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	247-284						
PDPOL_CHV1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	17-51	80-114	371-412				
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	733-787	1033-1074					
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-39						
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	5-39						
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39	297-338					
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S3)	5-39						
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS		291-325					
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39	224-265	533-595				
PDPOL_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235						
PDPOL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	201-235						
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	511-559						
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI	511-559						
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	511-559						
PDPOL_HSV1S	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	511-559						
PDPOL_HSV21	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	512-560						
PDPOL_HSVEB	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	494-528						
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)	33-67	328-366	401-435	706-749	801-858		
PDPOL_HSVTI	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	395-446						
PDPOL_MYVAC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	617-683	770-818	828-862				
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	617-683	770-818	828-862				
PDPOL_VACCV	DNA POLYMERASE	VARIOLA VIRUS	626-682	769-817	827-861				
PDPOL_VARV	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	473-533						
PDPOL_VZVD	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326						
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331						
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	290-331						
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	289-330						
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	290-331						
PDPOL_WHV81	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235						
PDPOM_HPBVY	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHY	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P	135-169						
PDUT_HSVEB	DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHY	HERPESVIRUS SAIMIRI (STRAIN 11)	179-223						
PDUT_HSV1A	EARLY E1A 21 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	101-141						
PE1A_ADE41	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	102-166						
PE1BL_ADE40	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 2	101-137						
PE1BS_ADE02	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 5	103-133						
PE1BS_ADE05	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	96-131						
PE1BS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	100-134						
PE1BS_ADE40	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 41	100-134						
PE1BS_ADE41	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	119-173						
PE1I4_ADE02	EARLY E1B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	2-39						
PE1I4_ADE05	EARLY E1B 13.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	8-49						
PE1I4_ADE12	EARLY E1B 14.5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 12	3-39						
PE1I4_ADE40	EARLY E1B 13.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	7-48						
PE1I4_ADE41	EARLY E1B 20.1 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 41	76-107						
PE1I9_ADE05	EARLY E1B 20.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 5	123-169						
PE1I1_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	10-44						
PE4I1_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	10-44						
PEA2_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	123-157						
PEBNA_EBV	EBNA-1 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	487-521						
PEFT1_VAAV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS	23-71	107-141					

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PENV1_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-375							
PENV2_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-378							
PENV_AVIRE	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	420-472							
PENV_AVISN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	426-478							
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	390-456							
PENV_BIV06	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	10-44	88-122	221-255	530-610	635-691			
PENV_BIV27	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	10-44	88-122	139-193	250-284	559-639	664-724		
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	304-379							
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-379							
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	304-379							
PENV_BLVB2	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	304-379							
PENV_BLVBS	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	304-379							
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-379							
PENV_CAEVC	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	157-196	615-720	751-785	847-895				
PENV_CAEVG	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	154-193	611-718	749-781	845-893				
PENV_EIAV1	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-1)	39-76	436-525	559-593	658-716				
PENV_EIAV2	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-2)	39-76	436-525	559-593	658-692				
PENV_EIAV3	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-3)	39-76	436-525	559-593	658-716				
PENV_EIAV5	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 2-5)	38-76	437-526	560-594	659-693				
PENV_EIAV9	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	39-76	436-525	559-593	658-716				
PENV_EIAVC	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	39-76	436-525	559-593	658-716				
PENV_EIAVW	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSU5)	39-76	436-525	559-593	658-716				
PENV_EIAVY	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	39-76	436-525	559-593	658-716				
PENV_FENV1	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	503-555	567-604						
PENV_FIVPE	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	610-690	715-756						
PENV_FIVSD	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	601-688	713-754						
PENV_FIVT2	ENVELOPE POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	60-122	609-689	714-755					
PENV_FLVC6	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	497-549	561-595						
PENV_FLVGL	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	478-530	542-576						
PENV_FLVLB	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	498-550	562-596						
PENV_FLVSA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	475-527	539-573						
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	1-41	154-205	321-355	563-693	856-901			
PENV_FSVGA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	498-550	562-596						
PENV_FSVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	478-530	542-576						
PENV_FSVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	481-524	545-579						
PENV_FSVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	498-532							
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	523-575	587-621						
PENV_HTL1A	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	321-383							
PENV_HTL1C	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	316-383							
PENV_HTL1M	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	321-383							
PENV_HTLV2	ENV POLYPROTEIN PRECURSOR	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	317-377							
PENV_HV1A2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	497-593	612-711	766-845					
PENV_HV1B1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	505-594	610-712	767-843					
PENV_HV1B8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH8 ISOLATE)	500-589	603-707	762-838					
PENV_HV1BN	ENVELOPE POLYPROTEIN GP160 PRECURSOR (CONT	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRAIN ISOLATE)	331-365	501-590	609-708	763-831				
PENV_HV1BR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	510-599	615-717	772-841					
PENV_HV1C4	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (CDC-451 ISOLATE)	342-376	510-606	626-724	779-835				
PENV_HV1EL	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	253-296	502-591	607-709	768-829				
PENV_HV1H2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	505-594	610-712	767-836					
PENV_HV1H3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB3 ISOLATE)	505-594	610-712	767-843					
PENV_HV1J3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JH3 ISOLATE)	343-377	517-605	622-723	778-843				
PENV_HV1JR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	329-363	497-586	603-704	759-835				

BAD ORIGINAL

PCGENE	ALLNOTES	All Viruses (no bacteriophage)								
		VIRUS	AREA1	ARFA1	AREA1	AREA4	AREA1	AREA2	AREA2	AREA1
FULLNAME	PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	118-122	338-372	511-545	555-599	618-677	681-711	772-845	
PENV_HV1KB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	259-300	301-596	617-714	776-833				
PENV_HV1MA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NFA ISOLATE)	303-392	622-710	765-841					
PENV_HV1MG	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NIH ISOLATE)	336-370	506-595	617-713	774-841				
PENV_HV1MN	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	326-360							
PENV_HV1N5	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	495-584	601-703	757-825				
PENV_HV1ND	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	336-370	497-593	610-711	766-843				
PENV_HV1OY	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	303-594	610-712	767-843					
PENV_HV1PV	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	344-378	507-603	618-721	776-852				
PENV_HV1RH	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	496-515	601-703	758-830					
PENV_HV1SI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	332-366	494-590	607-708	763-837				
PENV_HV1S3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	331-365	498-594	611-712	767-834				
PENV_HV1SC	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJII ISOLATE)	331-365	498-594	611-712	767-836				
PENV_HV1W1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	327-361	489-584	602-703	758-827				
PENV_HV1W3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (22/DDC-234 ISOLA	335-396	502-591	610-709	764-831				
PENV_HV1Z3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	331-295							
PENV_HV1Z3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	336-297	504-593	609-711	766-840				
PENV_HV1Z6	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-34 ISOLATE)	286-307	512-601	617-675	682-719	774-831			
PENV_HV1Z8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOL	323-594	612-671	675-712	777-839				
PENV_HV2H	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE DEN)	447-481	510-595	617-680					
PENV_HV2BE	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAN2)	312-597	619-709						
PENV_HV2CA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	301-316	608-698						
PENV_HV2D1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	439-473	502-587	609-699					
PENV_HV2G1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	KIRSTEN MURINE LEUKEMIA VIRUS	488-587	609-699						
PENV_HV2N2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	488-587	618-708						
PENV_HV2RO	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	511-596	613-703						
PENV_HV2S2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24.1C#	442-476	505-590	613-703					
PENV_HV2S8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	326-388	614-700						
PENV_HV2ST	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	505-590	613-703					
PENV_IPMAE	ENV POLYPROTEIN PRECURSOR	MOUSE INTRACISTERNAL A-PARTICLE	367-422	465-527						
PENV_JSRV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	401-455	571-605						
PENV_MCFF	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-515	537-571						
PENV_MCFT	ENV POLYPROTEIN PRECURSOR (COAT POLYPROTE	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLA	474-516	538-572						
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	301-555	587-601						
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	498-510	562-596						
PENV_MLVFS	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	320-564	576-610						
PENV_MLVFT	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	320-564	576-610						
PENV_MLVTP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FVC-211)	320-564	576-610						
PENV_MLVHO	ENV POLYPROTEIN PRECURSOR	HOMOLV MURINE LEUKEMIA VIRUS	304-551	563-597						
PENV_MLVKU	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-92	104-138						
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	302-554	566-600						
PENV_MLVRD	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	497-549	561-595						
PENV_MLVUK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-549	561-595						
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN DR6)	477-539	536-612						
PENV_MMTVO	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	477-539	536-612						
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	408-474							
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	41-95	103-141						
PENV_OMVVS	ENV POLYPROTEIN PRECURSOR	OVINE LENTIVIRUS (STRAIN SA-OMVV)	22-64	115-223	664-746	780-816				
PENV_RMCTV	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	484-528	540-574						
PENV_RSFFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER SPLEEN FOCUS-FORMING VIRUS	342-376							
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	1-41	101-140	134-205	1221-355	1361-451	618-693	1664-994	
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	5-46	158-209	310-337	360-706	1461-901			
PENV_SIVAI	ENV POLYPROTEIN PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	289-310	531-623	640-693					

BAD ORIGINAL

PCGENE	ALLMOTIF	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILE NAME	PROTEIN	VIRUS								
PENV_SIVAG	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	556-638	631-699	808-853					
PENV_SIVAI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	257-291	336-370	535-607	627-684	792-840			
PENV_SIVAT	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	264-298	349-431	644-692	796-833				
PENV_SIVCZ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	253-291	330-365	512-584	669-703	803-837			
PENV_SIVGB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	566-634	677-735						
PENV_SIVM1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	114-151	465-496	528-611	615-725	809-864			
PENV_SIVMQ	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	71-109	161-219	245-286					
PENV_SIVMR	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	464-503	549-612	618-728					
PENV_SIVSL	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	464-503	540-612	618-728					
PENV_SIVS4	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (F236SM04 ISOLATE)	466-509	517-616	618-728	812-893				
PENV_SIVSP	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/DC1) ISOLATE)	476-513	521-620	642-733	811-848				
PENV_SMRVH	ENV POLYPROTEIN PRECURSOR	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	400-466							
PENV_SRV1	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	409-475							
PENV_VILV	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514)	21-62	184-222	637-740	773-803				
PENV_VILV1	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	21-62	184-222	643-746	780-816				
PENV_VILV2	ENV POLYPROTEIN PRECURSOR	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K52)	21-62	184-222	645-748	782-818				
PERBA_AVTER	ERBA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	106-140							
PETF1_FOWP1	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	FOWLPOX VIRUS (STRAIN FP-1)	190-224	553-587						
PETF1_SPXKA	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	37-71	267-340	530-587					
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-71	307-341						
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	23-71	307-341						
PETF2_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	52-97	174-208						
PETF2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	52-97	174-208						
PEXON_HCMVA	ALKALINE EXONUCLEASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	80-114							
PEXON_HSVEB	ALKALINE EXONUCLEASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	89-141							
PEXON_PRVNI	ALKALINE EXONUCLEASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	82-130							
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-157	342-383						
PFIB1_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	182-217							
PFIB1_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	182-223							
PFIBP_ADE03	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 3	136-194							
PFIBP_ADE07	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 7	176-210							
PFIBP_ADE40	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	301-332							
PFIBP_ADE41	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	320-366							
PFIBP_ADEB3	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3	181-215	383-626						
PFOSX_MSVFR	V-FOS/FOX TRANSFORMING PROTEIN	FBR MURINE OSTEOSARCOMA VIRUS	131-169							
PFOS_AVIRK	P35-V-FOS TRANSFORMING PROTEIN	AVIAN RETROVIRUS NK24	109-132							
PFOS_MSVFB	P35-V-FOS TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	135-193							
POAGC_AVISC	P47(GAG-CRK) PROTEIN	AVIAN SARCOMA VIRUS (STRAIN CT10)	57-101							
POAG_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	57-94							
POAG_AVEV2	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	6-43							
POAG_AVMC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	57-94							
POAG_AVMD	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 1B1	57-94							
POAG_AVSU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	57-94							
POAG_AVSY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y73)	57-94							
POAG_BIV06	GAG POLYPROTEIN (P33)	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	1-41							
POAG_EIAVY	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	61-118							
POAG_FIVPE	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	76-110							
POAG_FIVSD	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	76-110							
POAG_FIVT2	GAG POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	76-110							
POAG_FLV	GAG POLYPROTEIN	FELINE LEUKEMIA VIRUS	498-537							
POAG_FOAMV	GAG POLYPROTEIN	HUMAN SPUMARETROVIRUS	138-186	391-425	439-480	607-655				
POAG_FSVMD	GAG POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	498-534							

BAD ORIGINAL

FCGENE	ALLMOTIS	All Viruses (no bacteriophage)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2	AREA
FILENAME	PROTEIN	VIRUS	37-94						
POAG_FUSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	393-444						
POAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS							
POAG_HV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	87-133	294-338					
POAG_HV1B1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	90-131	293-336					
POAG_HV1B5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	90-131	293-336					
POAG_HV1BR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIRU ISOLATE)	90-131	293-336					
POAG_HV1C4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	90-131	293-336					
POAG_HV1EL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	90-131	293-336					
POAG_HV1H2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	90-131	293-336					
POAG_HV1J3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	87-131	291-336					
POAG_HV1JR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	87-131	291-336					
POAG_HV1MA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	90-137						
POAG_HV1NA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NA ISOLATE)	87-134	295-339					
POAG_HV1NY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	90-131	293-336					
POAG_HV1NS	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	87-128	289-333					
POAG_HV1ND	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	90-131	293-336					
POAG_HV1OY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV13 ISOLATE)	90-131	293-336					
POAG_HV1PV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RFHAT ISOLATE)	90-131	293-336					
POAG_HV1RM	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	87-127						
POAG_HV1U4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	293-326						
POAG_HV1W2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (22/CDC-234 ISOLA	87-132	293-337					
POAG_HV1Z2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL/ISY)	293-326						
POAG_HV2SB	GAG POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	93-127	330-337					
POAG_IPNA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	87-103						
POAG_IPNAE	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	89-133	138-172					
POAG_JSRV	GAG POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	476-504						
POAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	83-131	154-190					
POAG_MMTVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	83-131	154-190					
POAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	122-160						
POAG_RSVP	GAG POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	37-94						
POAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A (SCV-L-A)	101-119	290-331					
POAG_SFV1	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	128-117	378-416	583-634				
POAG_SFV3L	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	373-407	415-532	591-631				
POAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	301-336						
POAG_SIVAG	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	308-340						
POAG_SIVAJ	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	183-217	413-307					
POAG_SIVAT	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	302-336						
POAG_SIVCZ	GAG POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	301-335						
POAG_SIVDB	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GD1)	161-204	223-267	383-317				
POAG_SM5AV	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS	394-431						
PHEL1_HSV11	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	172-206	769-820					
PHEL1_HSV2H	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	468-502	670-721					
PHEL1_HSV5A	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	158-203	413-449	599-633				
PHEL1_V2VD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	445-517	782-821					
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	208-242						
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	208-242						
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	208-242						
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	208-242						
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	208-242						
PHEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICH2/68)	380-436						
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	364-440						
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDGENIGARA/KOKAIDO/1/77)	378-434						

BAD ORIGINAL

PCGENE	ALLNOTES	All Viruses (no bacteriophage)								
FILE NAME	ENTITLE	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	378-454							
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	108-182	375-475	494-558					
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	360-432	487-532						
PHEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/	360-432	487-532						
PHEMA_IACK5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/SCOTLAND/59)	377-469	504-569						
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	112-146	377-469						
PHEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	378-454							
PHEMA_IADA3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	377-476	495-547						
PHEMA_IADA4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	380-453							
PHEMA_IADC2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-478	506-548						
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	378-454							
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/3/77)	21-55	377-472						
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/80)	364-440							
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/33/80)	364-440							
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/81)	364-440							
PHEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	364-440							
PHEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/85)	364-440							
PHEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	364-440							
PHEMA_IADR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/IRELAND/113/83)	378-431	506-551						
PHEMA_IADM1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76	21-55							
PHEMA_IADM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/918/74)	380-456							
PHEMA_IADNY	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/12/78)	21-55							
PHEMA_IADNZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/21/76)	378-454							
PHEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	21-55							
PHEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	380-456							
PHEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/321/77	380-456							
PHEMA_IAFPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	377-477							
PHEMA_IAGR8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-454							
PHEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	378-431							
PHEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/223/84)	377-476							
PHEMA_IAHAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	378-455							
PHEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/63)	112-146	360-484	503-537					
PHEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CAMBRIDGE/1/73)	112-146	360-484	503-537					
PHEMA_IAHCD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/C DETROIT/1/64)	360-484	503-537						
PHEMA_IAHD6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	360-484	503-537						
PHEMA_IAHFO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	378-455							
PHEMA_IAHK4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/70/86)	378-455							
PHEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	378-455							
PHEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	112-146	360-484	503-537					
PHEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	112-146	360-484	503-537					
PHEMA_IAHM4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	378-455							
PHEMA_IAHNM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	378-455							
PHEMA_IAHNN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/71)	112-146	360-484	503-537					
PHEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	112-146	360-484	503-537					
PHEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/RICHMOND/1/80)	378-455							
PHEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/85)	378-455							
PHEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	112-146	360-484	503-537					
PHEMA_IAHSW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/13/77)	112-146	360-484	503-537					
PHEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/80)	378-455							
PHEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	378-455							
PHEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	378-455							

BAD ORIGINAL

PCGENE	ALLMOTIF	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
TITLE NAME	PROTEIN	VIRUS								
PHEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57	373-467		503-547					
PHEMA_IAJAS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JEV/3/70)	376-478		506-548					
PHEMA_IAKIS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/3/41)	376-478		506-548					
PHEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ALLARD/ASTRAKHAN/244/82)	377-453							
PHEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ALLARD/ASTRAKHAN/263/82)	382-458							
PHEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ALLARD/NEW YORK/268/78)	380-456							
PHEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	380-456							
PHEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	380-456							
PHEMA_IAME3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	384-440							
PHEMA_IAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	108-142		375-475					
PHEMA_IAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	380-456							
PHEMA_IANT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/ALBANE/2/84)	378-477		496-534					
PHEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	376-478		506-548					
PHEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/	378-434							
PHEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	378-434							
PHEMA_IASE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	379-474		506-552					
PHEMA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/31/83)	112-146		377-469					
PHEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/81)	379-431		506-531					
PHEMA_IATKI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/81/80	378-434							
PHEMA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	393-470		504-548					
PHEMA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/61/81)	378-434		491-540					
PHEMA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	30-64		371-474					
PHEMA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	377-472		483-539					
PHEMA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1966)	377-472		483-539					
PHEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70/75)	21-53							
PHEMA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	387-436							
PHEMA_IAUS5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	376-478		506-548					
PHEMA_IAVI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	381-457							
PHEMA_IAWIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	373-477		505-547					
PHEMA_IAZCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	380-436							
PHEMA_IAZH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	384-440							
PHEMA_IAZH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1265/83)	384-440							
PHEMA_IAZHJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	379-478		506-548					
PHEMA_IAZIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	379-478		506-547					
PHEMA_IAZNJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UK/KEL/1/84	380-436							
PHEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87	388-473							
PHEMA_IVBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/45)	378-463							
PHEMA_IVBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	384-471							
PHEMA_IVBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	381-463							
PHEMA_IVBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	381-472							
PHEMA_IVBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MALAYSIA/1/59)	377-462							
PHEMA_IVBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	381-468							
PHEMA_IVBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	386-471							
PHEMA_IVBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	386-471							
PHEMA_IVBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	379-464							
PHEMA_IVBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	381-466							
PHEMA_IVBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	388-473							
PHEMA_IVBVX	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	483-531							
PHEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	471-519							
PHEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	471-519							
PHEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/81)	476-538							
PHEMA_INCKY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	484-532							
PHEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KYOTO/1/82)	476-538							
PHEMA_INCKY	HEMAGGLUTININ									

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	470-558							
PHEMA_INCNA	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/NARA/82)	470-558							
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	471-559							
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	471-559							
PHEMA_INCP3	MEASLES VIRUS (STRAIN HALLE)	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	471-559							
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47	471-559							
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	471-559							
PHEMA_MEASE	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN EDMONSTON)	46-90							
PHEMA_MEASH	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN HALLE)	46-90							
PHEMA_MEASI	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN IP-J-CA)	46-87							
PHEMA_MEASY	HEMAGGLUTININ-NEURAMINIDASE	MEASLES VIRUS (STRAIN YAMAGATA-1)	46-87							
PHEMA_MUMP1	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL-1	34-99							
PHEMA_MUMPM	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	34-99							
PHEMA_MUMPR	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN RW)	34-99							
PHEMA_MUMPS	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL)	34-99							
PHEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	8-52	477-529						
PHEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	1-49							
PHEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	1-52							
PHEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	1-52							
PHEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	1-52							
PHEMA_NDVTO	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B/48)	1-49							
PHEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	1-52							
PHEMA_PHODV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	39-73							
PHEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	66-110							
PHEMA_PI2H	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS	247-281							
PHEMA_PI2HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	247-281							
PHEMA_PI3B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	38-93							
PHEMA_PI3H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	13-110	394-428						
PHEMA_PI3HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/124854/74)	20-110	394-428						
PHEMA_PI3HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	13-110	394-428						
PHEMA_PI3HU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9305/82)	13-110	394-428						
PHEMA_PI3HV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/12677/83)	13-110	394-428						
PHEMA_PI3HW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/641/79)	13-110	394-428						
PHEMA_PI3HX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1511/73)	13-110	394-428						
PHEMA_PI4HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	54-88							
PHEMA_RACVI	HEMAGGLUTININ PRECURSOR	RACCOON POXVIRUS	166-214	256-290						
PHEMA_RINDK	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN KABETE O)	46-87							
PHEMA_RINDL	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	46-87	191-225						
PHEMA_SEND5	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	57-110							
PHEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIMI)	57-110							
PHEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	57-110							
PHEMA_SENDJ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	57-110							
PHEMA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	57-110							
PHEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	18-52	387-421						
PHEMA_SV5	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN WJ)	27-82							
PHEMA_SV5LN	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE HUMAN/LN)	27-82							
PHEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	177-211							
PHEXI_ADE02	PERIPENTONAL HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	90-134							
PHEXI_ADE05	PERIPENTONAL HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	90-134							
PHEX9_ADE02	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	85-134							
PHEX9_ADE05	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	85-134							
PHEX9_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 7, AND HUMAN ADENOVIRUS TYPE	93-138							

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE_NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PHEX9_ADE12	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 12	88-137							
PHEX9_ADE41	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 41	67-126							
PHEX9_ADEC2	HEXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 2	53-103							
PHEX9_ADENT	HEXON-ASSOCIATED PROTEIN	TUPAIA ADENOVIRUS	61-109							
PHEX_ADE02	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 2	341-386	433-467	583-624					
PHEX_ADE05	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 5	330-379							
PHEX_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	303-352	408-449	553-587					
PHEX_ADE41	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 41	306-355	555-589						
PHEX_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	301-346	385-419	544-578	705-739				
PHRG_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	320-395	455-489						
P1226_ASFB7	LATE PROTEIN 1226R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	110-151							
PIBMP_CAMV4	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	3-44	378-419						
PIBMP_CAMVB	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BARI 1)	379-420							
PIBMP_CAMVC	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	3-37	378-419						
PIBMP_CAMVD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D01)	3-44	378-419						
PIBMP_CAMVE	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D0C)	3-37	378-419						
PIBMP_CAMVJ	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN S-JAPAN)	3-37	378-419						
PIBMP_CAMVN	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	3-37	378-419						
PIBMP_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	3-37	378-419						
PIBMP_CAMVS	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	3-37	378-419						
PIBMP_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	3-37							
PIBMP_FMVD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DX5)	1-51	372-406						
PIBMP_SOCMV	INCLUSION BODY MATRIX PROTEIN		1-48	132-179						
PIC18_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	53-98	290-324	498-532					
PIC18_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	331-365							
PIC18_HSV1A	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	331-365							
PIC18_HSV1F	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	324-362							
PIC18_HSVB2	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	466-500							
PIC18_HSVEB	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS TYPE 1 (ISOLATE HVS25A)	341-375							
PIC18_HSVSA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	58-99	361-395						
PIC18_MCMVS	PROBABLE PROCESSING AND TRANSPORT PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	60-112	290-340	647-691					
PIC18_PRVIF	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	299-333	303-337						
PICP0_HSVBJ	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN JURA)	190-224							
PICP0_HSVBK	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN K22)	190-224							
PICP4_HSVMG	TRANS-ACTING TRANSCRIPTIONAL ACTIVATOR PR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	1022-1056							
PICP4_VZVD	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP4	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	920-954							
PIE63_HCMVA	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	207-241							
PIE63_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	241-275							
PIE63_HSVEB	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	282-316							
PIE63_VZVD	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	195-229	258-306						
PIE68_HSVE4	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	87-121							
PIE68_HSVEB	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	99-133							
PIE68_HSVSA	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	48-85							
PIR05_HCMVA	HYPOTHETICAL PROTEIN IRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	13-47							
PIR12_HCMVA	HYPOTHETICAL PROTEIN IRL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-162							
PKABL_FSVHY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 2)	280-314							
PKABL_MLVAB	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	ABELSON MURINE LEUKEMIA VIRUS	217-251							
PKAKT_MLVAT	AKT KINASE TRANSFORMING PROTEIN	AKT8 MURINE LEUKEMIA VIRUS	172-227	263-304						
PKFES_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	23-64	104-178						
PKFGR_FSVGR	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	218-252							
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	313-362	638-679	812-849					
PKFPS_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN PRCII)	65-99							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PKFPS_FUJSV	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FUJINAMI SARCOMA VIRUS	65-99	152-251	348-398					
PKITH_AMEPV	THYMIDINE KINASE	AMSACTA MOOREI ENTOMOPOXVIRUS	47-81							
PKITH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1	38-82							
PKITH_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	228-262	431-472						
PKITH_HSV11	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	90-124							
PKITH_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	90-124							
PKITH_HSV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	90-124							
PKITH_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	90-124							
PKITH_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	90-124							
PKITH_HSV2J	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	91-125							
PKITH_HSVBM	THYMIDINE KINASE	BOVINE HERPES VIRUS TYPE 2 (STRAIN WC11)	616-665							
PKITH_HSVE4	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	19-53	178-210						
PKITH_HSVEB	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	19-53	178-230						
PKITH_HSVF	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	180-214							
PKITH_HSVMR	THYMIDINE KINASE	MARMOSET HERPESVIRUS	52-86							
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	337-389							
PKITH_PRVNJ	THYMIDINE KINASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	161-202							
PKMIL_AVIMH	MIL SERINE/THREONINE-PROTEIN KINASE TRANSF	AVIAN RETROVIRUS MH2	69-103							
PKR15_HSV11	GENE 15 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	190-224							
PKR2_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	57-91	281-315						
PKR74_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	487-528	597-631						
PKRAF_MSV36	RAF SERINE/THREONINE-PROTEIN KINASE TRANSF	MURINE SARCOMA VIRUS 3611	11-45							
PKRB1_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	127-168							
PKRB1_VACCV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	127-168							
PKRB1_VARV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	123-171							
PKRB2_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-181							
PKRB2_VACCV	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-181							
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	169-203							
PKRF1_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	136-170							
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	169-203							
PKROS_AVISU	ROS TYROSINE KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN UR2)	111-145							
PKRYK_AVIRJ	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN RETROVIRUS RPL30	15-66							
PKTHY_VACCV	THYMIDYLATE KINASE	VACCINIA VIRUS (STRAIN WR), (STRAIN COPENHAGEN)	135-169							
PKYES_AVISY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN Y73)	174-233							
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	441-475							
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	223-264							
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	191-232	408-442						
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	199-233							
PL52_ADE02	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	238-284	301-349						
PL52_ADE05	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	238-284	301-349						
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	144-179	294-338						
PMCEL_SFVKA	MRNA CAPPING ENZYME	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-152	622-656						
PMCEL_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-41	623-657						
PMCEL_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	1-41	623-657						
PMCEL_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	1-39	623-657						
PMCES_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-137	245-286						
PMCES_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	72-137	245-286						
PMCES_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	72-137	245-286						
PMCE_ASFB7	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	116-157	279-313	738-772					
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	53-90							
PMOVP_PPMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	26-66							
PMOVP_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	29-66							

BAD ORIGINAL

PCGENE	ALLSIOTIS	All Viruses (no bacteriophage)							
GENE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PMOVP_TMVTO	MOVEMENT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO)	33-46						
PMOVP_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LIIA)	33-80						
PMOVP_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LII)	33-80						
PMTCI_CHVNI	MODIFICATION METHYLASE CVBI	CHLORELLA VIRUS NC-1A	222-236						
PMTCI_CHVPI	MODIFICATION METHYLASE CVAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	116-164						
PMYC_AVDAD	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	330-366	375-419					
PMYC_AVDMC	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	330-367	376-420					
PMYC_AVDMD	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 10D1	330-367	376-420					
PMYC_AVDME	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MILLE21	377-421						
PMYC_AVDOK	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	224-261	370-414					
PMYC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-437						
PMYC_FLVTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-437						
PNCAJ_CVMAJ	NUCLEOCAPSID PROTEIN	MURINE CORONAVIRUS NIHV (STRAIN A59)	12-46						
PNCAP_AINOV	NUCLEOCAPSID PROTEIN	AINO VIRUS	177-211						
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BERNE VIRUS	40-83	122-156					
PNCAP_BRSVA	NUCLEOCAPSID PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	62-101	163-200	240-283	240-283			
PNCAP_BUNGE	NUCLEOCAPSID PROTEIN	BUNYAVIRUS GERMISTON	176-218						
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	176-219						
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	174-219						
PNCAP_BUNYW	NUCLEOCAPSID PROTEIN	BUNYAMWERA VIRUS	175-218						
PNCAP_CCHFV	NUCLEOCAPSID PROTEIN	CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE C68/)	233-306	427-461					
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	117-174	179-217	334-402				
PNCAP_CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN 1653514)	40-84	221-269					
PNCAP_CVBF	NUCLEOCAPSID PROTEIN	BOVINE CORONAVIRUS (STRAIN F15)	349-383						
PNCAP_CVBM	NUCLEOCAPSID PROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	349-383						
PNCAP_CVCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	165-227						
PNCAP_CVHOC	NUCLEOCAPSID PROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	349-383						
PNCAP_CVMJH	NUCLEOCAPSID PROTEIN	MURINE CORONAVIRUS NIHV (STRAIN JHM)	12-46						
PNCAP_CVPFS	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	149-206						
PNCAP_CVPFU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	165-227						
PNCAP_CVPR8	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/13704 / BUT	149-228						
PNCAP_CVRLM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	149-228						
PNCAP_CVRSD	NUCLEOCAPSID PROTEIN	RAT CORONAVIRUS (STRAIN 681)	12-46						
PNCAP_CVTKE	NUCLEOCAPSID PROTEIN	TURKEY ENTERIC CORONAVIRUS	349-383						
PNCAP_DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	230-306						
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	151-206						
PNCAP_HANTV	NUCLEOCAPSID PROTEIN	HANTAAN VIRUS (STRAIN 76-118)	1-33	40-74	333-381				
PNCAP_HAZVI	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE JC280)	233-297						
PNCAP_HRSVI	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	62-105	163-200	248-303	248-303			
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	62-105	163-200	248-303	248-303			
PNCAP_IBVO	NUCLEOCAPSID PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN GRAY)	186-227						
PNCAP_IBVR	NUCLEOCAPSID PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8533)	186-220						
PNCAP_JUNIN	NUCLEOCAPSID PROTEIN	JUNIN ARENAVIRUS	94-111						
PNCAP_LASSO	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	63-113	126-174					
PNCAP_LASSI	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	63-113	122-174	447-504				
PNCAP_LDV	NUCLEOCAPSID PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	1-40						
PNCAP_LYCVA	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	61-117	460-497					
PNCAP_LYCVW	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	61-79	83-117	460-497				
PNCAP_MAGV	NUCLEOCAPSID PROTEIN	MAGUARI VIRUS	175-218						
PNCAP_MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	188-226	383-411					
PNCAP_MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	188-226	383-411					
PNCAP_MEASI	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN IP-J-CA)	188-226	383-411					

BAD ORIGINAL

FCGENE	ALLAHOTS	All Viruses (no bacteriophage)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4	AREA5	AREA5
PNCAP_MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	188-226	360-411								
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	63-106	471-503								
PNCAP_MUMP1	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	214-255	500-530								
PNCAP_MUMPM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-255									
PNCAP_PHV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	1-35	40-74	333-392							
PNCAP_PI1HC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	212-272	441-510								
PNCAP_PI1HW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	212-272	441-510								
PNCAP_PI1HT	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIBA)	214-266	344-398								
PNCAP_PI1B	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	200-403	444-490								
PNCAP_PI1H4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	87-135	208-266	344-401	468-491						
PNCAP_PI4HA	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	58-94	191-267								
PNCAP_PI4HB	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 48-333)	58-94	191-267								
PNCAP_PIARV	NUCLEOCAPSID PROTEIN	PICHINDE ARENAVIRUS	63-112									
PNCAP_PIRYV	NUCLEOCAPSID PROTEIN	PIRY VIRUS	21-116	325-359								
PNCAP_PUUMH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	1-35	40-75	337-392							
PNCAP_PUUMS	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	1-35	40-75	337-383							
PNCAP_PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	93-141	248-303	344-388							
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	133-187									
PNCAP_SENDI	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	212-272	345-404								
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	212-272	345-404								
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	212-272	345-408								
PNCAP_SEOUS	NUCLEOCAPSID PROTEIN	SEOUL VIRUS (STRAIN SR-11)	1-35	40-74	333-381							
PNCAP_SIV41	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	213-267	372-406	418-466							
PNCAP_STNV	NUCLEOCAPSID PROTEIN	SONCHUS YELLOW NET VIRUS	132-166									
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACAIUBE VIRUS	30-84	220-264								
PNCAP_TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	215-249									
PNCAP_TSWVB	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPM11/BR	79-120									
PNCAP_TSWVH	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (HAWAIIAN ISOLATE)	79-120									
PNCAP_TSWVL	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LJ)	79-120									
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	31-102									
PNCAP_VHSVB	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	249-335									
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MARAJO)	142-180	249-335								
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	42-108									
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	63-115									
PNCAP_VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	42-115									
PNEF_HV2BE	NEGATIVE FACTOR	HUMAN BARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	7-41									
PNEF_HV2D1	NEGATIVE FACTOR	HUMAN BARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	7-41									
PNEF_HV2RO	NEGATIVE FACTOR	HUMAN BARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	112-160									
PNEF_HV2SB	NEGATIVE FACTOR	HUMAN BARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	109-150									
PNEF_HV2ST	NEGATIVE FACTOR	HUMAN BARUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	108-149									
PNEF_SIVAJ	NEGATIVE FACTOR	SIMIAN BARUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	96-140									
PNEF_SIVS4	NEGATIVE FACTOR	SIMIAN BARUNODEFICIENCY VIRUS (F236SMM (ISOLATE)	9-43	333-367								
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/10/77	47-81									
PNRAM_IACAO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CANFELA/ONGOLIA/3)	31-74									
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	50-91									
PNRAM_IACKQ	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/	249-283									
PNRAM_IACKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/125/	249-283									
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	14-48									
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	14-48	194-229								
PNRAM_IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COH/1/74	10-47	193-231								
PNRAM_IAKR1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	361-401								
PNRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/1/79)	50-91									

BAD ORIGINAL

FCGENE	ALLAMOTIS	AB Viruses (no bacteriophages)	AREA1	AREA1	AREA2	AREA1	AREA5	AREA4	AREA1	HHLYB
FILE NAME	PROTEIN	VIRUS	30-91							
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/19/1)	30-91							
PNRAM_IAAE1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/AEDMP/115/1/71H-A/BELLANY/42)	30-91							
PNRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LUDDY TURNSTONE/NEW JERSE	49-91							
PNRAM_IASH1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	10-44							
PNRAM_IAIRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	1-41							
PNRAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C75)	49-83							
PNRAM_IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	10-91							
PNRAM_IAWD4	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALE/ANE/1/84)	49-91							
PNRAM_INBBE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	5-46	148-383						
PNRAM_INBHK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	5-46	149-383						
PNRAM_INBLS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	5-46	148-383						
PNRAM_INBLN	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/19746)(STRAIN B/A	5-39	148-382						
PNRAM_INBMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	5-39	149-383						
PNRAM_INBAE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/AENEID/115/2/89)	5-46	148-382						
PNRAM_INBOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/ORE GON/5/90)	5-46	149-383						
PNRAM_INBSI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	5-39	149-383						
PNRAM_INBUS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	5-39	149-383						
PNRAM_INBVI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	5-39	148-382						
PNS1_SIDEV	PROBABLE STRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	790-838							
PNS5_INSVN	NON-STRUCTURAL PROTEIN	INFATIENS NECROTIC SPOT VIRUS (STRAIN NL-01)	85-139	204-231						
PNS5_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH/BR	3-37							
PNS5_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN L)	3-37							
PNTP1_AMEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS	28-69	110-144						
PNTP1_CBEPV	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	122-169	415-460	514-553					
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	86-90	248-288	549-599					
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	86-90	248-288	549-599					
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	134-193	455-505						
PNTP1_MSVAU	MAJOR ANTIGENIC STRUCTURAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	189-233	669-735						
PPAP1_VACCC	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-180							
PPAP1_VACCV	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)	121-180							
PPAP1_VARV	POLY(A) POLYMERASE CATALYTIC SUBUNIT	VARIOLA VIRUS	121-180							
PPAP2_CAPVK	POLY(A) POLYMERASE REGULATORY SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)	112-146							
PPAP2_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	91-134	201-249						
PPAP2_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	203-249							
PPAP2_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	203-249							
PPAP2_VARV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VARIOLA VIRUS	203-249							
PPE12_NPVAC	12.1 KD PROTEIN IN PE 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-56	60-103						
PPE12_NPVOP	11.3 KD PROTEIN IN P26 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	11-98							
PPE38_NPVAC	MAJOR DATEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	19-77	197-249						
PPE38_NPVOP	MAJOR DATEDIATE EARLY PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	190-240							
PPE48_NPVAC	48.3 KD PROTEIN IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-42	48-89	93-131					
PPE48_NPVOP	47.3 KD PROTEIN IN PE-P26 INTERGENIC REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	47-82	183-199						
PPIV2_ADE01	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 1	414-448							
PPIV6_ADE02	PROTEIN VI PRECURSOR	HUMAN ADENOVIRUS TYPE 2	37-71							
PPIV6_ADE05	PROTEIN VI PRECURSOR	HUMAN ADENOVIRUS TYPE 5	37-71							
PPOL1_BAYMO	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	329-363	741-777	955-991	1165-1199	2229-2266	2309-2332	2168-2404	
PPOL1_BAYMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN 11-1)	329-363	671-705	743-777	937-994	1265-1299	2227-2264	2207-2350	2366-2402
PPOL1_BAYMJ	GENOME POLYPROTEIN 1	HUNGARIAN GRAPEVINE CHROMATE MOSAIC VIRUS	130-161	165-216	220-273	377-415				
PPOL1_GCMV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	170-212	480-519	616-657	691-725	1157-1196	1378-1412	1906-1943	
PPOL1_GFLV	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	123-170	928-977						
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	181-206							
PPOL1_TRSVA	RNA1 POLYPROTEIN	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	240-281	669-733	739-773	787-828				
PPOL2_BAYMO	GENOME POLYPROTEIN 2									

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL3_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	669-732	739-773	787-828					
PPOL3_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	365-406	542-602						
PPOL3_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	6-38							
PPOL3_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	158-206	334-368						
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	849-886	1008-1064	1382-1416	1459-1507	1576-1617			
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	244-289	446-491	629-663	1033-1074	1303-1344	1392-1443	1869-1910	2226-2260
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	245-289	446-491	629-663	1033-1074	1303-1344	1392-1443	1779-1820	2136-2170
PPOLG_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	96-130							
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	9-43	562-596	664-698	1045-1100	1498-1546	1607-1648	1805-1839	1901-1946
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	15-49	1040-1086	1895-1940					
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	15-49	1021-1067	1876-1921					
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	15-49	1024-1070	1879-1924					
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	15-49	642-681	1022-1068	1877-1922				
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	15-49	1024-1070	1879-1924					
PPOLG_CYVV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	120-154							
PPOLG_DEN1B	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN 836-1)	74-108							
PPOLG_DEN1A	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN AITF 82-80)	74-108							
PPOLG_DEN1C	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN CV1636/77)	74-108							
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	74-108	832-873	960-994	1142-1179	1386-1420	1614-1648	2518-2554	2946-3016
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	74-108	833-874	961-995	1143-1180				
PPOLG_DEN21	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M1)	448-492							
PPOLG_DEN22	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M2)	448-495							
PPOLG_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2517-2551
PPOLG_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2485-2551
PPOLG_DEN2D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	728-777							
PPOLG_DEN2H	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TH-36)	497-546							
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2517-2551
PPOLG_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	213-247	398-432						
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159S1)	74-108	728-777	832-875	961-995	1146-1180	1246-1280	1418-1452	1615-1649
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	448-497	552-595	681-715	866-900	966-1000	1205-1239		
PPOLG_DEN2U	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PUO-218)	614-663							
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	830-872	959-993	1385-1419	2224-2258	2480-2521	2704-2738	2940-2978	2980-3014
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	957-993	1380-1414	2314-2353	2701-2735	2941-2975	2977-3011		
PPOLG_EC11G	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	213-259	1079-1113						
PPOLG_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1074-1113	1472-1518	1522-1570	1665-1706	1789-1823			
PPOLG_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETO	145-179	1076-1117	1474-1520	1524-1572	1667-1708			
PPOLG_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGEN	145-179	1076-1117	1474-1520	1524-1572	1667-1708			
PPOLG_ENMG3	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 37A)	145-179							
PPOLG_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	78-112							
PPOLG_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	221-255	294-328	578-612	1103-1153	1493-1528	2165-2200		
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	220-254	293-327	577-611	1103-1164	1493-1528	2164-2199		
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND O1BFS)	221-255	1103-1153	1493-1528	2164-2199				
PPOLG_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU [C-S	87-128	693-728						
PPOLG_FMDVT	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1)	221-255	283-317	577-611					
PPOLG_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	364-398							
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	440-493	626-660	695-729	1033-1070	1190-1235	1307-1343	1779-1820	2136-2170
			2466-2500	2525-2559	2667-2708	3057-3098	3152-3193	3406-3440		
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	440-493	626-660	695-729	1033-1070	1193-1235	1779-1820	2136-2170	2388-2436
PPOLG_HCVBK			2466-2500	2525-2559	2667-2708	3057-3098	3152-3195	3406-3440	3521-3562	
PPOLG_HCVE0	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	357-398	2328-2365						
PPOLG_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC10)	65-99							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLO_HCVH4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	364-398							
PPOLO_HCVH7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476)	364-398							
PPOLO_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT27)	236-270							
PPOLO_HCVHX	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT18)	248-282							
PPOLO_HCVJ2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-KF)	357-398							
PPOLO_HCVJ5	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J2)	357-398							
PPOLO_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J5)	364-398							
PPOLO_HCVJ7	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	364-401	1716-1750	2082-2116					
PPOLO_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J7)	364-398							
PPOLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	364-398	1716-1750	2082-2116	2468-2502	2538-2572			
PPOLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	357-405	2331-2365						
PPOLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	357-391	2331-2365						
PPOLO_HPAV2	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	357-398	2328-2365	2444-2503					
PPOLO_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLO_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	2-43	101-135	203-237	870-904	1021-1055	1117-1151		
PPOLO_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CRJ26)	2-43	101-135	203-237					
PPOLO_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	80-114	182-216						
PPOLO_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	2-43	101-135	203-237	870-904	1021-1055	1103-1151		
PPOLO_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	2-43	101-135	203-237	870-904	1021-1055	1103-1151		
PPOLO_HPAVS	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	2-43	101-135	203-237	870-904	1021-1055	1103-1158		
PPOLO_HPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	6-47	105-139	207-241	849-908	1025-1059	1115-1155	1158-1198	
PPOLO_HRV14	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	2-43	101-135	203-237					
PPOLO_HRV1A	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1020-1054	1393-1427	1479-1513	1877-1920				
PPOLO_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1A (HRV-1A)	362-396							
PPOLO_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	387-421	861-904	1133-1168					
PPOLO_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	856-897	1126-1169	1552-1593					
PPOLO_HUEV7	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	1566-1607							
PPOLO_IBDVO	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71)	359-397	876-917	1032-1088	1403-1441	1896-1934			
PPOLO_IAEV1	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	134-168	250-291	475-524					
PPOLO_JAEV5	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	74-122	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLG_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	74-122	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLO_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	74-128	211-256	539-576	980-1014	1409-1450	2463-2497	2739-2777	2782-2823
			3322-3359	3387-3428						
PPOLG_KUNIM	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	7-48	138-183	467-504	908-942	1337-1378			
PPOLG_LANVT	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	74-108	207-251	851-885	2464-2498	2528-2579	2740-2778	3325-3359	3389-3433
PPOLG_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	68-102	431-465	962-996	1431-1472	1932-1966	2536-2591	2967-3001	3003-3037
			3102-3145							
PPOLG_LIV	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	68-102	431-465						
PPOLG_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (LI)	68-123	231-272	431-465					
PPOLG_MCFA	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 526)	151-185							
PPOLG_MVEV	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	80-114	908-942	2049-2087	2630-2689	3036-3095	3290-3341		
PPOLG_OMV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	67-115	209-253	853-887	979-1013	1408-1449			
PPOLG_PEMVC	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	481-515	946-984	1072-1106					
PPOLG_POL1M	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	55-100	207-248	377-411	704-738	827-862	877-947	1021-1055	1167-1201
			1488-1529	1787-1821	1948-1982	2202-2236	2258-2310	2805-2839	3003-3037	
PPOLG_POL1S	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	9-43	1046-1101	1414-1448	1500-1548	1806-1840	1902-1947		
PPOLG_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	9-43	899-933	1047-1102	1415-1449	1501-1549	1610-1651	1808-1842	1904-1949
PPOLG_POL2W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	9-43	897-931	1045-1100	1413-1447	1502-1547	1608-1649	1806-1840	1902-1947

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 2	AREA 1
PPOLO_POL32	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	9-43	897-931	1045-1100	1413-1447	1503-1537	1608-1649	1806-1840	1902-1947
PPOLO_POL3L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 23127)	9-43	896-930	1044-1098	1412-1446	1498-1536	1607-1648	1805-1839	1901-1946
PPOLO_PPVD	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS PALEON3 AND PALEON 12A[11B]	9-43	896-930	1044-1099	1412-1446	1498-1536	1607-1648	1805-1839	1901-1946
PPOLO_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	164-208	441-503	728-769	813-867	921-955	1741-1782		
PPOLO_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	116-157	784-818	1146-1197					
PPOLO_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	164-208	403-437	440-502	727-768	814-873	920-934	1740-1781	
PPOLO_PRSVH	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	164-208	403-437	440-502	727-768	814-866	920-934	1740-1781	
PPOLO_PRSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA)	68-102	434-468						
PPOLO_PRSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT HA 5-1)	325-359							
PPOLO_PSBMV	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	325-359							
PPOLO_PVYC	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC [redacted] (STRAIN DPDI)	293-315	335-389	529-589	915-976	984-1018	1080-1177	1588-1627	1808-1860
PPOLO_PVYRU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN C)	1971-2015	2379-2413	2712-2746	2870-2907				
PPOLO_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	131-196	701-735	802-836					
			144-181	701-735	802-863	901-949	1401-1441	1492-1526	1728-1772	1777-1818
PPOLO_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	2372-2406							
			140-196	211-245	701-735	802-863	1401-1441	1492-1526	1728-1772	1777-1818
			1929-1970							
PPOLO_PWVSE	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	140-196	211-245	701-735	802-856				
PPOLO_PWVTB	GENOME POLYPROTEIN	PASSIONFRUIT WOODINESS VIRUS (STRAIN SEVERE)	201-237							
PPOLO_PYFV1	GENOME POLYPROTEIN	PASSIONFRUIT WOODINESS VIRUS (STRAIN TIP BRIGHT)	201-237							
PPOLO_STEVM	GENOME POLYPROTEIN	PASNIP YELLOW FLECK VIRUS (ISOLATE P-121)	194-228	1111-1172	1379-1413	1858-1899	1950-1991	2703-2737		
PPOLO_SYDVH	GENOME POLYPROTEIN	ST. LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	106-143	673-707	739-773	973-1009	1404-1438			
PPOLO_SYDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN HO 76)	13-49	1024-1070	1779-1813	1890-1924				
PPOLO_TBEVS	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG27/72)	13-49	1024-1070	1890-1924					
PPOLO_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN)	68-140	231-272	431-465	1138-1192	1431-1472	1929-1966	2182-2216	2535-2590
			1965-2999	3031-3092	3100-3143					
PPOLO_TEV	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	68-140	231-272	431-465	1138-1192	1431-1492	1932-1966	2536-2591	2967-3001
			3003-3037	3053-3094	3102-3145					
PPOLO_TMEVB	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (S	TOBACCO ETCH VIRUS	73-124	166-222	540-584	726-782	828-935	1148-1192	1416-1460	1494-1535
			1668-1702	1747-1781	1792-1826	2395-2434	2787-2821			
PPOLO_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN	1106-1140	1403-1518	1601-1635					
PPOLO_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1104-1138	1401-1516	1599-1663					
PPOLO_TUMV	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1106-1140	1403-1518	1601-1635					
PPOLO_TVMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	216-259	314-362	494-528	768-839	1443-1477			
PPOLO_WAV2	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	24-68	401-449	667-704	781-813	851-885	969-1017	1031-1072	1643-1677
PPOLO_WNV	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	1686-1725	2316-2374	2701-2749	2814-2848				
PPOLO_YEFV1	GENOME POLYPROTEIN	WEST NILE VIRUS	68-105	202-236						
			74-108	207-231	847-881	973-1007	1413-1447	2461-2495	2535-2578	2737-2775
			3220-3253	3285-3426						
PPOLO_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	418-452	525-563	728-768	1388-1444	2231-2276	2477-2565	2938-2996	3097-3143
PPOLO_YEFV3	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	418-452	525-563	728-768	1388-1444	2231-2276	2477-2565	2938-2996	3097-3143
PPOLO_POLIM	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 1899/81)	75-116	418-452	525-563	728-768				
PPOLN_EEVVT	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	9-43	1047-1102	1413-1449	1501-1549	1610-1651	1808-1842	1904-1949	
PPOLN_FCVC6	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD	345-382	898-932	1945-1979					
PPOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	310-344							
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	4-45	369-410	986-1020	1023-1061				
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	338-379	1138-1177						
PPOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	338-379							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	338-379	1139-1184						
PPOLN_MIDDV	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	337-378	1138-1178						
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	922-977							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLN_RHDV	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	899-933	1942-1986	2444-2502					
PPOLN_RRVN	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	188-234	306-347	409-457	1657-1716				
PPOLN_RRVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	895-929	1928-1962	2414-2467					
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	597-631	1083-1136						
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	1506-1540	1551-1585	1730-1767	1862-1896				
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1094-1128	2358-2392						
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	919-971	1491-1525	1961-1996	2444-2478				
PPOLN_EPMV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1491-1525	1959-1994	2442-2476					
PPOLS_EEEV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	899-933	1127-1161						
PPOLS_EEEVJ	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	372-406	914-951						
PPOLS_EEVVB	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA33[TEN BRO	373-407	915-952						
PPOLS_EEVVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1216-1250							
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD	1216-1250							
PPOLS_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	134-168	231-286	470-523					
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALI	134-168	231-286	470-523					
PPOLS_IBDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	134-168	231-286	470-523					
PPOLS_IBDVP	NONSTRUCTURAL PROTEIN VP4	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	134-168	231-286	304-340					
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	115-149	212-267	451-504					
PPOLS_IPNVJ	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	134-168	249-283	470-523					
PPOLS_IPNVN	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	69-103	723-785						
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	716-786							
PPOLS_RRV2	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	1204-1238							
PPOLS_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN 213970)	35-69							
PPOLS_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	369-403	939-973						
PPOLS_RUBVH	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973							
PPOLS_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	999-1036							
PPOLS_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	999-1036							
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	999-1036							
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	362-396							
PPOLS_SINDW	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	362-396							
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (WILD TYPE SB DERIVED FROM STRAIN AR339)	34-68							
PPOL_BAEVM	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	913-947							
PPOL_BLVAU	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	42-80	676-743	794-832	1001-1042				
PPOL_BLVJ	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	625-673							
PPOL_CAEVC	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	625-673							
PPOL_CAMVD	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	879-934							
PPOL_COYMV	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	177-211							
PPOL_EIAV9	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	87-121	333-367	447-498	838-876	896-930	1310-1351		
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	513-566	1022-1056						
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	513-566	1022-1056						
PPOL_FENV1	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	512-565	1021-1055						
PPOL_FIVPE	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	533-600	623-659	858-899					
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	429-473	606-663						
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	428-473	606-642						
PPOL_FMVD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	428-472	595-662						
PPOL_FOAMV	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	403-437							
PPOL_GALV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	140-174	217-256	285-326					
PPOL_HTL1A	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	528-562	673-740						
PPOL_HTL1C	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	670-711							
PPOL_HV1A2	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE	670-711							
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	501-537	606-664						
PPOL_HV1B5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	513-549	639-676						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	513-549	618-676						
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	513-549	618-676						
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	500-536	626-663						
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	501-537	606-664						
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	505-541	610-668						
PPOL_HV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	476-536	601-663						
PPOL_HV1NS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	504-540	609-667						
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL	501-537	627-664						
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	500-536	626-663						
PPOL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	501-537	606-664						
PPOL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	513-549	693-676						
PPOL_HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	500-536	605-663						
PPOL_HV1Z3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN	500-536	601-663						
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	500-536	626-663						
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	49-83	484-582	653-687	817-851				
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	356-390	464-562	632-666					
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	502-600	671-705						
PPOL_HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205,7)	376-410	484-526	529-577	653-687				
PPOL_HV2NZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1	464-562	633-667						
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	44-78	356-390	464-529	633-667				
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	357-391	465-563	634668					
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	46-80	473-562	633-667					
PPOL_IPHA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	484-518	522-577	653-687					
PPOL_JSRV	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	462-503							
PPOL_MLVAK	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	190-231							
PPOL_MLVAV	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	325-392							
PPOL_MLVFS	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	677-744							
PPOL_MLVFF	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	682-749							
PPOL_MLVFP	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FD29)	682-749							
PPOL_MLVMO	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	682-749							
PPOL_MLVRD	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	677-744							
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	677-744							
PPOL_MPMV	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	62-129							
PPOL_OMVVS	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	470-504	578-613						
PPOL_RSVP	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	470-505	855-910						
PPOL_RTBV	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	646-684							
PPOL_RTBVP	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	7-44	59-96	101-135	176-216	325-362	433-474	1005-1039	1405-1439
PPOL_SFV1	POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	7-44	59-96	101-135	176-216	325-362	433-474	1005-1039	1405-1439
PPOL_SFV3L	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	349-383	427-464	494-535					
PPOL_SIVA1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	124-165	429-467	496-530					
PPOL_SIVA2	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	351-385	637-678	737-771	938-979				
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM266 ISOLATE)	45-86							
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	477-516	642-683	742-783					
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	175-209	476-515	641-700	942-983	1020-1054			
PPOL_SIVCZ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	657-698	757-798						
PPOL_SIVGB	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	527-561	626-688						
PPOL_SIVM1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	9-57	446-483	629-673	793-827	912-946			
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	485-519	654-688						
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	485-519	654-688						
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMM4 ISOLATE)	448-482	617-651						
PPOL_SOCMV	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	451-485	620-654						
PPOL_SRVI	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	247-295	372-416						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL_VILV	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	470-504	578-613						
PPOL_VILVI	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	489-524	874-929						
PPOL_VILV3	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	489-524	874-929						
PPPIS_HCMVA	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	489-524	874-929						
PPR7J_MMTVB	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-150	187-221						
PPR7J_MMTVC	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	152-200							
PPR7J_MMTVG	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	20-79							
PPR7L_MMTVG	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	61-95	142-201						
PPR7R_MMTVG	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	145-204	270-311						
PPYHD_CPVBM	PROTEIN PR7J	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	141-200	266-307						
PPYHD_NPVAC	POLYHEDRIN PRECURSOR	BOMBYX MORI CYTOPLASMIC POLYHEDROSIS VIRUS	13-85							
PPYHD_NPVAS	POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVBM	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVBS	POLYHEDRIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	12-54							
PPYHD_NPVLD	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVMB	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS V	14-48							
PPYHD_NPVOP	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS	14-48							
PPYHD_NPVOS	POLYHEDRIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	13-47							
PPYHD_NPVPF	POLYHEDRIN	ORGYIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHED	14-48							
PPYHD_NPVSE	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS	14-48							
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN	14-48							
PPYHD_NPVSL	POLYHEDRIN	SPODOPTERA FRUGIPERDA NUCLEAR POLYHEDROSIS VIRUS	14-48							
PRASK_MSVKI	POLYHEDRIN	SPODOPTERA LITTORALIS NUCLEAR POLYHEDROSIS VIRUS	17-51							
PREV_BIV27	TRANSFORMING PROTEIN 21	KIRSTEN MURINE SARCOMA VIRUS	142-176							
PREV_EIAV9	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	77-115							
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	51-89							
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	51-89							
PREV_HV112	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	81-119							
PREV_HV1A2	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CLONE 12)	35-69							
PREV_HV1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	32-69							
PREV_HV1B8	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	35-69							
PREV_HV1BN	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	25-59							
PREV_HV1BR	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-59							
PREV_HV1EL	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	35-69							
PREV_HV1H2	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	32-66							
PREV_HV1J3	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	35-69							
PREV_HV1JR	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	29-63							
PREV_HV1MA	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	31-66							
PREV_HV1MN	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	31-66							
PREV_HV1OY	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	31-66							
PREV_HV1PV	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	32-69							
PREV_HV1S3	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) AN	35-69							
PREV_HV1SC	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	35-69							
PREV_SIVAI	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	32-69							
PREV_SIVAG	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	26-77							
PREV_SIVAJ	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	26-77							
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	29-77							
PREV_SIVCZ	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	28-75							
PREV_VILV	REV PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	33-67							
PRIR1_ASFM2	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	21-62							
PRIR1_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	7-41	88-133	635-683					
PRIR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	213-247	689-721						

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)								
FILE_NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRIR1_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	632-668							
PRIR1_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	76-110							
PRIR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HERPESVIRUS SAIMIRI (STRAIN 11)	324-365							
PRIR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-402							
PRIR1_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN WR)	367-402							
PRIR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARIOLA VIRUS	367-402							
PRIR2_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	223-257							
PRIR2_HSVB3	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	EPSTEIN-BARR VIRUS (STRAIN B95-8)	89-137							
PRIR2_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	101-135							
PRIR2_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	106-140							
PRIR2_SFVKA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	HERPESVIRUS SAIMIRI (STRAIN 11)	125-159							
PRIR2_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	SHOPE FIBROMA VIRUS (STRAIN KASZA)	98-132							
PRIR2_VACCP	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN COPENHAGEN)	98-132							
PRIR2_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN L-IVP)	98-132							
PRIR2_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VACCINIA VIRUS (STRAIN WR)	98-132							
PRL1_HSV2H	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SMA	VARIOLA VIRUS	98-132							
PRP94_VACCV	NEUROVIRULENCE FACTOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	171-212							
PRP94_VARV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION S	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN	116-150	465-540	757-791					
PRPO1_VACCC	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION S	VARIOLA VIRUS	41-75	116-150	465-540	757-791				
PRPO1_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN COPENHAGEN)	243-291	622-656	754-791	954-988	1006-1057			
PRPO1_VARV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN WR)	243-291	622-656	754-791	954-988	1024-1058			
PRPO2_CAPVK	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VARIOLA VIRUS	243-291	622-656	754-791	954-988	1006-1057			
PRPO2_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	CAPRIPOXVIRUS (STRAIN KS-1)	19-60	114-155	589-630					
PRPO2_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	COWPOX VIRUS	211-245	359-400	833-874					
PRPO2_VARV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	211-245	359-400	833-874					
PRPO4_VACCC	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VARIOLA VIRUS	211-245	359-400	833-874					
PRPO4_VACCV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-116							
PRPO4_VARV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	62-116							
PRPO5_VACCC	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPEP	VARIOLA VIRUS	62-116							
PRPO5_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-71							
PRPO5_VARV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VACCINIA VIRUS (STRAIN WR)	1-71							
PRPO6_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPEP	VARIOLA VIRUS	1-71							
PRPO6_VARV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPEP	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	25-59							
PRPO7_VACCV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPEP	VARIOLA VIRUS	25-59							
PRPO7_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	43-93							
PRPOA_LELV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEP	VARIOLA VIRUS	43-93							
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1533-1567	1721-1758	1958-1992	2109-2157				
PRRP1_IAANN	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	1083-1117	1477-1518	1633-1673					
PRRP1_IABE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-242	279-313						
PRRP1_IADUN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/BEIJING/11/56)	171-242	279-313	350-391					
PRRP1_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/DUNEDIN/4/73)	171-242	279-313						
PRRP1_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	171-242	279-313						
PRRP1_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	168-242	279-313						
PRRP1_IAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	168-242	279-313						
PRRP1_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	171-242	279-313						
PRRP1_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	171-242	279-313						
PRRP1_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	171-242	279-313						
PRRP1_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	171-242	279-313						
PRRP1_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	171-242	279-313						
PRRP1_IAME3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	171-242	279-313						
PRRP1_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/8/88)	171-242	279-313						
PRRP1_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	171-242	279-313						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRP1_IASN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	168-242	279-313						
PRRP1_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	171-242	279-313						
PRRP1_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80	171-242	279-313						
PRRP1_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	171-242	279-313						
PRRP1_IAWIS	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	168-242	279-313						
PRRP1_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	168-242	279-313						
PRRP1_IAZON	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	187-242	279-313						
PRRP1_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	171-242	279-313						
PRRP1_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	171-242	279-313						
PRRP1_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66)	208-249							
PRRP1_INBLE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE]	208-249							
PRRP1_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	208-249							
PRRP2_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	350-384	648-686	707-752					
PRRP2_IADH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	110-144	177-218						
PRRP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	110-144	177-218						
PRRP2_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	110-144	177-218						
PRRP2_IAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	110-144	177-218						
PRRP2_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	110-144	177-218						
PRRP2_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	110-144	177-218						
PRRP2_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	110-144	177-218						
PRRP2_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	110-144	177-218						
PRRP2_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	110-144	177-218						
PRRP2_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	110-144	177-218						
PRRP2_IAPI0	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	110-144	177-218						
PRRP2_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	110-144	177-218						
PRRP2_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	110-144	177-218						
PRRP2_IASDN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERS	110-144	177-218						
PRRP2_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	110-144	177-218						
PRRP2_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	110-144	177-218						
PRRP2_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	110-144	177-218						
PRRP2_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	110-144	177-218						
PRRP2_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78	110-144	177-218						
PRRP2_IAZI1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	110-144	177-218						
PRRP2_IAZTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	110-144	177-218						
PRRP2_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	110-144	177-218						
PRRP2_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	111-196	349-390						
PRRP2_INBSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	111-196	349-390						
PRRP3_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	111-196	349-383						
PRRP3_IABUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	363-402	473-514	707-755				
PRRP3_IACH1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	1-42	363-402	473-514	518-567	707-755			
PRRP3_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	1-42	363-402	473-514	707-755				
PRRP3_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	363-402	473-514	707-755				
PRRP3_IAGU2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRID	1-42	363-402	473-514	707-755				
PRRP3_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77	1-42	363-402	473-514	707-755				
PRRP3_IAIIK6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	7-41	363-402	473-514	707-755				
PRRP3_IAIILO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/860)	1-42	363-402	473-514	707-755				
PRRP3_IAHPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	1-42	363-402	473-514	707-755				
PRRP3_IAKDE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	1-42	363-402	473-514	721-755				
PRRP3_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	1-42	363-402	473-514	707-755				
PRRP3_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	1-42	363-402	473-514	707-755				
PRRP3_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	1-42	363-402	473-514	707-755				
PRRP3_IALE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	1-42	363-402	473-514	707-755				

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRP3_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/47/57)	1-42	363-402	473-514	707-755				
PRRP3_IAMEB	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	363-402	473-514	707-755					
PRRP3_IANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/8/88)	7-41	363-402	473-514	707-755				
PRRP3_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	1-42	363-402	473-514	707-755				
PRRP3_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	1-42	363-402	473-514	707-755				
PRRP3_IASE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSE	1-42	363-402	473-514	707-755				
PRRP3_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/133/82)	1-42	363-402	473-514	707-755				
PRRP3_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	1-42	363-402	473-514	707-755				
PRRP3_IAVI7	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	1-42	363-402	473-514	707-755				
PRRP3_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	1-42	363-402	473-514	707-755				
PRRP3_IAZI1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33	1-42	363-402	473-514	707-755				
PRRP3_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	1-42	363-402	473-514	707-755				
PRRP3_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77	7-41	363-402	473-514	707-755				
PRRP3_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTE	458-533							
PRRP3_INCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	458-533							
PRRP3_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	235-269	275-309						
PRRP3_THOGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	235-269	275-316						
PRRPA_CVH22	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	THOGOTO VIRUS	343-401							
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	358-392	495-571	1742-1776	1971-2008	2664-3724	3912-3946		
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	617-651	1364-1398	2769-2803	3586-3620	3821-3855	4075-4121	4319-4353	
PRRPB_CVMAS	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	20-64	617-651	943-1009					
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	1129-1170	1303-1337	1453-1494	1692-1726	2629-2670			
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	1129-1170	1303-1337	1453-1494	1690-1726	2627-2668			
PRRPB_IBVK	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	499-550	650-695	1460-1494	1509-1548	2246-2287			
PRRPL_BTVI0	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	135-156							
PRRPL_BUNYW	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	208-242	705-748	825-903	1021-1076	1114-1201			
PRRPL_CDVO	RNA POLYMERASE	BUNYAMWERA VIRUS	2-36	80-114	308-363	371-412	1704-1741	1802-1861	1889-1935	
PRRPL_HANTV	RNA POLYMERASE BETA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	20-54							
PRRPL_HRSVA	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	98-139	174-208	372-431	557-591	655-696	731-783	905-949	1276-1310
			1419-1453	1742-1776	1993-2027					
PRRPL_MABVM	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2	87-188	827-861	1131-1179	1185-1220	1465-1517			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	597-631	1046-1092	1490-1552	1804-1838	2029-2063	2194-2266		
PRRPL_MEASE	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	597-631	1046-1092	1490-1552					
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	197-231	790-824	869-903	1064-1109	1283-1317	2121-2155		
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	164-214	220-254	267-304	576-627	752-807	1231-1286	1447-1481	1487-1531
			1566-1600	2191-2225						
PRRPL_PI2HT	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	167-208	230-295	1969-2013	2043-2077	2108-2142			
PRRPL_PI3H4	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	136-170	575-628	750-785	1226-1284	1316-1357	1417-1479	1564-1630	1687-1721
			1901-1955							
PRRPL_PUUMH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	48-91	107-163	540-574	747-781	1064-1119	1293-1356	1499-1536	1994-2036
PRRPL_RABVP	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	98-132	381-415	444-488	557-591	655-696	731-783	922-976	1119-1153
			1742-1776	1940-1975	1993-2032					
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	73-114	197-231	696-730	1174-1222	1522-1580	1584-1618	2068-2123	
PRRPL_RDV	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	73-114	197-231	696-730	749-783	1174-1222	1522-1580	1584-2123	
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	17-61	534-575	844-878	918-985	1037-1071			
PRRPL_SENDS	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	398-439	641-678	832-887	1081-1115	1653-1687	1819-1870		
PRRPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	309-343	540-600	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034
			2146-2216							
PRRPL_SEND2	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	129-163	360-420	432-476	567-601	884-939	1059-1100	1319-1356	1820-1854
			1966-2036							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRPL_SEOU	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	309-343	540-600	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034
			2146-2216							
PRRPL_SVSWR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	98-139	174-208	557-591	655-696	731-765	1742-1776	1947-1981	1993-2027
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	547-627	747-781	1225-1280	1319-1353	1592-1626	1676-1715	2024-2058	
PRRPL_TSWVB	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	760-794	825-859	977-1014	1089-1127	1978-2032	2059-2107		
PRRPL_UUK	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH1/BR	46-101	399-433	539-573	589-634	1119-1153	1195-1236	1321-1379	1538-1572
			1684-1725	1857-1898	2073-2127	2156-2200	2206-2247	2315-2368	2378-2419	2809-2843
		UUKUNIEMI VIRUS	127-183	282-323	836-874	1030-1071	1481-1515	2015-2049	2061-2098	
PRRPL_VSVJH	RNA POLYMERASE	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	319-358	674-715	720-763	1522-1567	1802-1836			
PRRPL_VSVJO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	319-358	674-715	720-763	1802-1836				
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	674-715	720-763	1019-1074	1742-1799	2066-2107			
PRRPO_ACLSV	RNA POLYMERASE BETA SUBUNIT	APPLE CHLOROTIC LEAF SPOT VIRUS	228-262	557-596	916-950	1235-1269				
PRRPO_BWYVF	RNA-DIRECTED RNA POLYMERASE	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	304-341							
PRRPO_BYDVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	234-285							
PRRPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	234-285							
PRRPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	234-285							
PRRPO_CARMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS	93-131							
PRRPO_CGMVS	PROBABLE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STR	7-41	387-428	446-480	726-767	1445-1479			
PRRPO_IBDVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	384-432	446-484						
PRRPO_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALI	144-185	266-307	709-757	771-809				
PRRPO_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	147-181	268-407	501-535	750-802				
PRRPO_IPNVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	147-181	366-407	501-535	753-802				
PRRPO_LYCVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	301-346	805-886	926-960	1509-1543	2090-2124			
PRRPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	301-345							
PRRPO_MCMV	RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS	181-215	697-731						
PRRPO_PEAMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	PEA ENATION MOSAIC VIRUS	321-358							
PRRPO_PLRVI	RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN 1)	336-373	423-457						
PRRPO_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	336-373	423-457						
PRRPO_PPMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN	321-362	402-454	627-661	862-896				
PRRPO_RCNMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS	666-700							
PRRPO_REOVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	310-361							
PRRPO_REOVI	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	310-344							
PRRPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	310-361							
PRRPO_ROTBR	RNA-DIRECTED RNA POLYMERASE	BOVINE ROTAVIRUS (STRAIN RF)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805
PRRPO_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805
PRRPO_ROTPC	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	3-44	255-299	335-397	476-510	518-620	966-1007		
PRRPO_ROTPO	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	62-96	133-167	336-377	581-631	636-686	690-724	771-842	
PRRPO_ROTSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	60-96	133-167	535-569	579-631	639-686	690-724	771-805	
PRRPO_SBMV	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SOUTHERN BEAN MOSAIC VIRUS	628-665							
PRRPO_SCVLA	PROBABLE RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	100-134	147-191						
PRRPO_TACV	RNA-DIRECTED RNA POLYMERASE	TACARIBE VIRUS	155-204	220-278	375-416	484-518	891-925	1030-1081	1285-1319	1981-2015
PRRPO_TMGMV	RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	401-449	682-720	765-818					
PRRPO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE)	3-37	401-453	665-699					
PRRPO_TMVKR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN)	3-37	401-453	665-699					
PRRPO_TMVTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	3-37	401-453	860-894					
PRRPO_TNVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE									

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PRRPP_BRSVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D)	102-144							
PRRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-158	160-216						
PRRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	312-373							
PRRPP_HRSV1	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-158	160-216						
PRRPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	99-158	160-216						
PRRPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-158	160-216						
PRRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRA	99-158	160-216						
PRRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-374	460-495						
PRRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	315-374	460-495						
PRRPP_MUMPI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	315-374	460-495						
PRRPP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	149-183	213-275						
PRRPP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	214-276							
PRRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-276							
PRRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32	100-134							
PRRPP_PI1HB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	100-138							
PRRPP_PI1HC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	80-114	313-364	375-437					
PRRPP_PI1HD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	80-114	313-364	375-437					
PRRPP_PI1HE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	80-114	313-364	375-437					
PRRPP_PI2H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/830)	66-114	217-271	313-364	375-437				
PRRPP_PI2HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	218-281							
PRRPP_PI2B	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	218-281							
PRRPP_PI3H6	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	31-130	414-470						
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	410-499							
PRRPP_PI4HB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38	222-285						
PRRPP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333)	222-285							
PRRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	137-174							
PRRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	93-127							
PRRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	93-127							
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND (STRAIN PM)	93-127							
PRRPP_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127							
PRRPP_SEND5	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19	93-127							
PRRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	313-364	375-447						
PRRPP_SENDF	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/94)	313-364	375-447						
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	313-364	375-447						
PRRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	313-364	375-447						
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	313-364	375-447						
PRRPP_SYNV	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN WJ)	203-278							
PRRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	SONCHUS YELLOW NET VIRUS	138-173	233-281						
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	3-43							
PRRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN M	3-43							
PRRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	3-37							
PRRPP_VSVSJ	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA	3-37							
PSPHR_AMEPV	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	3-43							
PSPI2_VACCV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	223-264	361-395						
PSPI2_VARV	SERINE PROTEINASE INHIBITOR	VACCINIA VIRUS (STRAIN WR)	21-86							
PSPI3_VACCC	SERINE PROTEINASE INHIBITOR 2	VARIOLA VIRUS	21-86							
PSPI3_VACCV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-167	225-266						
PSPI3_VARV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN WR)	118-167	225-266						

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PSPIA_VACCC	SERINE PROTEINASE INHIBITOR 3	VARIOLA VIRUS	122-171	219-270						
PT2C2_CHVP1	SERINE PROTEINASE INHIBITOR 2 HOMOLOG FIRST	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-65							
PTAA3_VACCV	TYPE II RESTRICTION ENZYME CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	48-85							
PTAG8_FOWPV	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS (STRAIN WR, COPENHAGEN, AND VARIOLA VI	95-133	173-207						
PTAG8_VACCV	TRANS-ACTIVATOR PROTEIN FP9	FOWLPOX VIRUS	3-51							
PTAG8_VARV	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS (STRAIN WR) (STRAIN COPENHAGEN)	3-51							
PTALA_BFDV	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-51							
PTALA_POVBO	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-325	464-498						
PTALA_POVHA	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	303-337	495-537						
PTALA_POVIC	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	464-501	587-621						
PTALA_POVLY	LARGE T ANTIGEN	POLYOMAVIRUS JC	153-187	589-623						
PTALA_POVMJ	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	3-41	206-258	437-478					
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	509-544							
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	507-542							
PTAMJ_POVHA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	504-539							
PTAMJ_POVMJ	MIDDLE T ANTIGEN	HAMSTER POLYOMAVIRUS	339-378							
PTAMJ_POVMA	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	211-245	388-422						
PTAMJ_POVMC	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	192-226	369-403						
PTASM_POVBO	MIDDLE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	192-226	369-403						
PTASM_POVLY	SMALL T ANTIGEN	BOVINE POLYOMAVIRUS	41-85							
PTATR_NPVAC	SMALL T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	3-41							
PTATR_NPVBM	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	408-442	46-480	489-523					
PTATR_NPVOP	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	413-447	451-485	494-528					
PTAT_SIVAI	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	391-455	511-554						
PTAT_SIVAI	TAT PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	73-109							
PTAT_VILV	TAT PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR	137-185							
PTAT_VILV1	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514)	28-74							
PTAT_VILV2	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	40-74							
PTCB_FLV	TRANS-ACTIVATING TRANSCRIPTIONAL REGULAT	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	40-74							
PTEGP_HSV11	T-CELL RECEPTOR BETA CHAIN PRECURSOR	FELINE LEUKEMIA VIRUS	279-321							
PTEGP_HSVEA	TEGUMENT PHOSPHOPROTEIN US9	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	27-61							
PTEGP_HSVEB	NONSENSE									
PTEGP_HSVEK	NONSENSE									
PTEGP_HSVSB	NONSENSE									
PTEGU_EBV	NONSENSE									
PTEGU_HCMVA	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	768-802	821-855	938-972	1101-1138	1208-1242	1479-1516	1700-1753	1809-1867
			1870-1916	1920-1954	3108-3149					
PTEGU_HSV11	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-71	215-249	543-581	700-738	868-909	936-977	1004-1038	1163-1200
			1237-1298	2200-2235						
PTEGU_HSV6Q	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	731-765	801-842	1022-1059	1223-1269	1275-1309	1315-1370	1520-1531	1609-1669
			1673-1714	1749-1783	1820-1854	2670-2704				
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	30-71	224-262	567-608	732-757	951-1000	1091-1181	1192-1233	1357-1400
PTEGU_HSVSA	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	560-597	635-683	794-848	908-956	1108-1151	1155-1246	1399-1458	1487-1549
			1619-1657	1661-1695	1702-1736	1806-1843	1947-1981			
PTEGU_VZVD	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	520-558	560-598	615-652	672-710	777-822	846-898	948-986	1287-1332
			1434-1502							
PTERM_ADE02	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	657-696	713-747	804-841	933-972	1117-1158	1415-1471	1528-1562	1572-1620
			1633-1705	1719-1756	1945-1986	2727-2761				
PTERM_ADE05	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	490-572							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 5	490-592							
PTERM_ADE12	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	491-559							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PTUN_AVIS1	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 12	443-491	497-538						
PTMAF_AVIS4	TRANSFORMING PROTEIN JUN	AVIAN SARCOMA VIRUS (STRAIN 17)	210-284							
PTOP1_SFVKA	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	247-288	295-340						
PTOP2_ASFB7	DNA TOPOISOMERASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	127-183	269-310						
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	146-180	481-515	601-642	945-979	1038-1093	1123-1162		
PTSIS_SMSAV	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	146-180	480-514	600-641	902-936	944-978	1038-1091	1122-1161	
PTYSV_VZVD	PDGF-RELATED TRANSFORMING PROTEIN P28-SIS	SIMIAN SARCOMA VIRUS	16-71							
PUBIL_NPVOP	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	215-260							
PUL01_HCMVA	UBIQUITIN-LIKE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	43-80							
PUL01_HSV11	HYPOTHETICAL PROTEIN UL1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	169-203							
PUL01_HSV2H	PROTEIN UL1	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	94-128							
PUL01_HSVEB	PROTEIN UL1	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	92-126							
PUL04_HSV11	GENE 60 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	70-104							
PUL06_EBV	PROTEIN UL4	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	102-136							
PUL06_HCMVA	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-145	313-347	376-410					
PUL06_HSV11	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	216-250							
PUL06_HSVEB	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	36-94	103-141	294-329	337-371	416-479			
PUL06_HSVSA	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	62-170	357-413	448-503					
PUL06_VZVD	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	90-140	351-194	302-336	364-405				
PUL08_HCMVA	VIRION GENE 54 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	87-131	350-409	704-738					
PUL09_HSVEB	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-50							
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	174-208							
PUL11_HCMVA	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL13_HCMVA	NONSENSE									
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-81	185-227						
PUL14_HSVEB	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	305-343							
PUL14_PRVN3	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	52-96	246-283						
PUL14_VZVD	UL14 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	43-95							
PUL16_HSVEB	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	61-103							
PUL17_HSV6U	GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	266-300							
PUL21_HSVEB	PROTEIN 10R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102	239-280							
PUL23_HCMVA	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-78	421-474						
PUL24_HCMVA	HYPOTHETICAL PROTEIN UL23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-253							
PUL24_ILTVT	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-39							
PUL25_HCMVA	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V88	161-195							
PUL25_HSV11	HYPOTHETICAL PROTEIN UL25	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	255-341	351-399						
PUL25_HSVEB	VIRION PROTEIN UL25	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	370-411							
PUL25_HSVSA	VIRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	364-413							
PUL25_ILTVT	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	29-92	183-231	365-406					
PUL25_VZVD	64.1 KD VIRION PROTEIN	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V88	38-84	165-206						
PUL31_HCMVA	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	240-288							
PUL31_HSVEB	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	244-285							
PUL31_VZVD	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	153-187							
PUL32_HSVEB	GENE 27 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	163-197							
PUL32_VZVD	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (STRAIN AB1)	342-376							
PUL33_HCMVA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	72-106	296-344						
PUL33_VZVD	G-PROTEIN COUPLED RECEPTOR HOMOLOG UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	94-135	309-352						
PUL34_EBV	GENE 25 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	29-63							
PUL34_HCMVA	BFRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-200							
PUL34_HSV11	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	113-147							
PUL35_HCMVA	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	187-221							
PUL37_EBV	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	231-268							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUL37_HSV11	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	708-742							
PUL37_HSVEB	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	853-891							
PUL37_HSVSA	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	82-137	311-345	614-648	715-750	781-822			
PUL37_VZVD	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	6-63	682-741						
PUL38_HCMVA	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS).	719-753	786-827						
PUL41_VZVD	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	10-51							
PUL42_HSV11	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRU" (STRAIN DUMAS)	330-366							
PUL42_HSVEB	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	134-168	221-263						
PUL43_HCMVA	DNA-BINDING GENE 18 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	138-172							
PUL43_HSVE4	HYPOTHETICAL PROTEIN UL43	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	72-109							
PUL43_VZVD	MEMBRANE PROTEIN UL43 HOMOLOG	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	27-68							
PUL45_HSV1K	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	312-363							
PUL45_HSV1M	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	96-137							
PUL47_HCMVA	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	96-137							
PUL47_HSV11	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-165	448-485	745-856					
PUL47_HSV1F	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	473-518							
PUL47_HSVBP	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F	473-518							
PUL47_HSVE4	80.7 KD ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	561-612							
PUL47_HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	183-246	582-620	825-866					
PUL47_VZVD	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	219-253	371-412	817-866					
PUL50_HCMVA	ALPHA TRANS-INDUCING FACTOR 91.8 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	84-135	156-209	664-701					
PUL51_HSV11	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	155-189							
PUL51_HSVE4	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	118-169							
PUL51_HSVEB	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	121-162							
PUL51_VZVD	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	120-161							
PUL52_EBV	GENE 7 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL53_HSV11	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	188-255							
PUL52_HSVEB	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-223							
PUL52_HSVSA	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	141-182	929-970						
PUL52_VZVD	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	445-483							
PUL53_HCMVA	PROBABLE DNA REPLICATION GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	201-242							
PUL55_HSV1H	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	12-48							
PUL64_HCMVA	PROTEIN UL55	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	151-185							
PUL70_HCMVA	HYPOTHETICAL PROTEIN UL64	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	32-73							
PUL74_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	39-99							
PUL87_HSV6U	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-79							
PUL87_HSVSA	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	729-770							
PUL88_HCMVA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	366-400	582-616						
PUL91_HSVSA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	357-391							
PUL92_EBV	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	24-58							
PUL93_HCMVA	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	188-222						
PUL92_HSV6U	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-116							
PUL92_HSVSA	HYPOTHETICAL PROTEIN 9R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	101-145	174-216						
PUL93_HCMVA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	88-122							
PUL95_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	23-57	299-384						
PUL95_HSV6U	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-71	259-293						
PUL96_HCMVA	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	73-151	233-270						
PUL96_HSV6U	HYPOTHETICAL PROTEIN UL96	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	51-103							
PUL96_HSVSA	HYPOTHETICAL PROTEIN 14R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	53-113							
PUL42_HCMVA	HYPOTHETICAL GENE 35 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	45-100							
PUL44_HCMVA	HYPOTHETICAL PROTEIN UL102	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40	758-792						
PUL00_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1-56	130-171	330-364	439-492	541-575			

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUNO_HSV11	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	84-125							
PUNO_HSV23	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	227-268							
PUNO_HSV2H	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	188-229							
PUNO_HSVSA	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52	148-189							
PUNO_SFVKA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	135-176							
PUS02_HSVEB	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-115							
PUS02_HSVEK	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	79-120							
PUS07_HCMVA	US1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	86-120							
PUS11_HCMVA	HYPOTHETICAL PROTEIN HCLF5		2-36							
PUS14_HCMVA	HYPOTHETICAL PROTEIN HCLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)								
PUS18_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	3-51							
PUS23_HCMVA	MEMBRANE PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	187-225							
PUS24_HCMVA	HYPOTHETICAL PROTEIN HCLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-335	535-578						
PUS26_HCMVA	HYPOTHETICAL PROTEIN HCLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-172							
PUS27_HCMVA	HYPOTHETICAL PROTEIN HCLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-584							
PUS30_HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40							
PV123_AMVLE	HYPOTHETICAL PROTEIN HCLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	135-169	274-312						
PV143_NPVAC	125 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN	18-52	326-367	591-649					
PV16K_TRVPS	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	313-350	1114-1150	1179-1213					
PV16K_TRVSY	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	75-117							
PV1A_BBMV	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	75-117							
PV1A_BMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	21-55	349-405	492-526	710-751	837-884	890-924		
PV1A_CCMV	1A PROTEIN	BROME MOSAIC VIRUS	4-66	348-411						
PV1A_CMVFN	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	4-53	242-276	348-389	487-526				
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-66	393-434	584-619	868-916				
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	11-66	393-434	584-619	868-916				
PV1A_PSVI	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-66	393-434						
PV1A_TAV	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	4-66							
PV22K_HSVTH	1A PROTEIN	TOMATO ASPERMY VIRUS	11-59	392-433	857-923					
PV24K_BDV	23.5 KD PROTEIN	TURKEY HERPESVIRUS (STRAIN H2)	177-211							
PV25K_NPVAC	24 KD ANTIGEN	BORNA DISEASE VIRUS	63-121	130-171						
PV28K_PLRVI	25 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-50							
PV28K_PLRVW	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	116-150							
PV290_ASFLS	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	116-150							
PV29K_PEBV	LIS 290 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)	138-183							
PV29K_TRVSY	29.6 KD PROTEIN	EARLY BROWNING VIRUS	115-192							
PV29K_TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM), AND (STRAIN PSG)	167-201							
PV2A_CCMV	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	45-79							
PV2A_CMVFN	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	768-806							
PV2A_PSVI	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	386-420							
PV2A_TAV	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	717-751							
PV30K_TRVTC	2A PROTEIN	TOMATO ASPERMY VIRUS	722-756							
PV360_ASFB7	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	105-218							
PV361_ASFB7	K'360 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	53-87	151-192						
PV363_ASFB7	K'362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	54-102	161-212	290-324					
PV3A_BMV	D'363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	153-199							
PV3A_CMVFN	3A PROTEIN	BROME MOSAIC VIRUS	11-45							
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	215-255							
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	215-255							
PV3A_CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	215-255							
PV51K_ACLSV	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	215-255							

BAD ORIGINAL

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PV51K_BWYVF	50.8 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	72-106							
PV51K_BWYVG	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	113-147	196-233	404-451					
PV56K_PLRVI	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GB1)	113-147	196-233	407-451					
PV56K_PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I)	47-81	438-472						
PV58K_BSMV	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	47-81	438-475						
PV66K_BWYVF	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-162	323-371						
PV70K_PLRVI	66.2 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	480-521							
PV70K_PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I)	98-144	514-548						
PV90K_AMVLE	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	98-144	409-443	514-548					
PVA04_VACCC	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-141							
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	32-66	231-275						
PVA04_VARV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	32-66	231-275						
PVA06_VACCC	PROTEIN A4	VARIOLA VIRUS	22-66	210-265						
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-213	314-355						
PVA06_VARV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	96-212	313-354						
PVA08_VACCC	PROTEIN A6	VARIOLA VIRUS	97-213	313-358						
PVA08_VARV	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-216							
PVA09_VACCC	PROTEIN A8	VARIOLA VIRUS	176-216							
PVA09_VARV	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	46-81							
PVA11_VACCC	PROTEIN A9	VARIOLA VIRUS	46-95							
PVA11_VARV	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-134	141-175	219-283					
PVA12_VACCC	PROTEIN A11	VARIOLA VIRUS	98-176	220-284						
PVA12_VARV	PROTEIN A12	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-148							
PVA18_VACCC	PROTEIN A12	VARIOLA VIRUS	111-152							
PVA18_VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN	433-467							
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	307-341	433-467						
PVA20_VACCC	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	307-341	433-467						
PVA20_VARV	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67							
PVA22_VACCC	PROTEIN A20	VARIOLA VIRUS	1-67							
PVA22_VARV	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-69							
PVA23_VACCC	PROTEIN A22	VARIOLA VIRUS	29-80							
PVA23_VARV	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-143	173-207	255-289	344-382				
PVA31_VARV	PROTEIN A23	VARIOLA VIRUS	95-143	173-207	255-289	344-382				
PVA32_VACCV	PROTEIN A31	VARIOLA VIRUS	88-126							
PVA32_VARV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN								
PVA33_VARV	PROTEIN A32	VARIOLA VIRUS	217-251							
PVA36_VACCV	PROTEIN A33	VARIOLA VIRUS	63-97							
PVA36_VARV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	26-67	109-155						
PVA37_VACCC	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	26-67							
PVA37_VACCV	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	24-65							
PVA38_VACCC	PROTEIN A37	VACCINIA VIRUS (STRAIN WR)	24-65							
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-91							
PVA38_VARV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	44-91							
PVA39_VACCC	PROTEIN A38	VARIOLA VIRUS	44-91							
PVA39_VACCV	PROTEIN A39	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71							
PVA46_VACCC	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	75-109							
PVA46_VACCV	PROTEIN A46	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-126							
PVA46_VARV	PROTEIN A46	VACCINIA VIRUS (STRAIN WR)	81-126							
PVA47_VACCC	PROTEIN A46	VARIOLA VIRUS	81-126							
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-96	143-184						
PVA47_VARV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	62-96	143-184						

ALLMOTIS
Motif Search Results

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVA49_VACCC	PROTEIN A47	VARIOLA VIRUS	62-96	143-184						
PVA49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-40	126-160						
PVA49_VARV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	3-40	126-160						
PVA52_VACCC	PROTEIN A49	VARIOLA VIRUS	3-40	126-160						
PVA52_VACCV	PROTEIN A52	VACCINIA VIRUS (STRAIN COPENHAGEN)	91-132							
PVA57_VACCC	PROTEIN A52	VACCINIA VIRUS (STRAIN WR)	91-132							
PVA57_VACCV	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-168							
PVALI_MSVK	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	134-168							
PVALI_MSVN	ALI PROTEIN	MAIZE STREAK VIRUS (KENYAN ISOLATE)	230-269							
PVALI_MSVS	ALI PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	228-262							
PVALI_SLCV	ALI PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	228-262							
PVALI_TYDVA	ALI PROTEIN	SQUASH LEAF CURL VIRUS	117-151							
PVALI_ADMVW	ALI PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	191-225							
PVALJ_BGMV	ALJ PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	44-78	83-124						
PVALJ_PYMVV	ALJ PROTEIN	BEAN GOLDEN MOSAIC VIRUS	44-78	83-124						
PVALJ_SLCV	ALJ PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	30-78	87-121						
PVALJ_TGMV	ALJ PROTEIN	SQUASH LEAF CURL VIRUS	46-80	91-125						
PVAT_CAMVC	ALJ PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	44-78							
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	84-127						
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70							
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	93-127						
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	93-127						
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	93-127						
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	22-70	93-130						
PVAT_CERV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	36-70							
PVB03_VACCV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	99-138							
PVB04_VACCC	PROTEIN B3	VACCINIA VIRUS (STRAIN WR)	108-142							
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-123	321-372	496-530					
PVB04_VARV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	89-123	321-372						
PVB05_VACCO	PROTEIN B4	VARIOLA VIRUS	89-124	324-372	492-530					
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16MO)	254-298							
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	254-298							
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	254-298							
PVB07_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	254-298							
PVB08_VACCC	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	28-62							
PVB08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-60							
PVB18_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	26-60							
PVB18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375	491-532						
PVB18_VARV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375	491-532						
PVB19_VACCC	PROTEIN B18	VARIOLA VIRUS	337-378	491-532						
PVB19_VACCD	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-121							
PVB19_VACCV	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	85-119							
PVB20_VACCC	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN WR)	85-119							
PVB21_VACCV	PROTEIN B20	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-85							
PVBLI_BGMV	PROTEIN B21	VACCINIA VIRUS (STRAIN WR)	61-95							
PVBLI_SLCV	BLI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	159-193							
PVBLI_TGMV	BLI PROTEIN	SQUASH LEAF CURL VIRUS	159-193							
PVBRI_BGMV	BLI PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	159-193							
PVBRI_SLCV	BRI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	172-206							
PVBRI_TGMV	BRI PROTEIN	SQUASH LEAF CURL VIRUS	20-61							
PVC02_VACCC	BRI PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	25-59							
PVC02_VACCV	PROTEIN C2	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-82	262-302	391-442					

PCGENE	ALLMOTIF	AB Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS	37-82	262-302	391-442					
PVC04_SFVKA	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	175-223	374-408						
PVC04_VACCC	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	12-46							
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46							
PVC04_VARV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46							
PVC01_SFVKA	PROTEIN C1	VARIOLA VIRUS	82-125							
PVC01_VACCC	HYPOTHETICAL PROTEIN C1	SHOPE FIBROMA VIRUS (STRAIN KASZA)	31-68							
PVC01_VACCV	PROTEIN C1	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-68							
PVC01_VARV	PROTEIN C1	VACCINIA VIRUS (STRAIN WR)	32-70	73-121						
PVC08_SFVKA	PROTEIN C8	VARIOLA VIRUS	45-86							
PVC09_SFVKA	HYPOTHETICAL PROTEIN C9	SHOPE FIBROMA VIRUS (STRAIN KASZA)	63-106							
PVC09_VACCC	HYPOTHETICAL PROTEIN C9	SHOPE FIBROMA VIRUS (STRAIN COPENHAGEN)	82-116	168-226	289-333	373-412				
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-116	168-226	289-333	373-412				
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	126-180							
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	126-174							
PVC10_VARV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	126-170							
PVC11_SFVKA	PROTEIN C10	VARIOLA VIRUS	2-36							
PVC11_SFVKA	HYPOTHETICAL PROTEIN C12	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-46	137-182	189-240					
PVC16_VACCC	PROTEIN C13	SHOPE FIBROMA VIRUS (STRAIN KASZA)	142-176							
PVC17_VACCC	PROTEIN C16/822	VACCINIA VIRUS (STRAIN COPENHAGEN)	100-155	325-359						
PVC18_VACCC	PROTEIN C17/822	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-98							
PVC19_SFVKA	PROTEIN C18/824	VACCINIA VIRUS (STRAIN KASZA)	56-97							
PVC19_VACCC	PROTEIN C19	SHOPE FIBROMA VIRUS (STRAIN COPENHAGEN)	218-252							
PVCAP_EBV	PROTEIN C19/821	VACCINIA VIRUS (STRAIN COPENHAGEN)	130-184	670-709						
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	136-174	191-225	260-294					
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-175	308-356						
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	136-174	230-266	311-382					
PVCAP_HSVEB	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS	130-184	304-352						
PVCAP_HSV5A	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	479-520	672-714	755-799					
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	105-160	292-326						
PVCAP_VZVD	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S)	128-198	316-350						
PVCG3_NPVAC	DNA-BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	110-248							
PVD01_FOWPI	92.6 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	145-181							
PVD03_VACCC	PROTEIN D3	FOWLPOX VIRUS (STRAIN FP-1)	123-157							
PVD03_VACCV	PROTEIN D3	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-157							
PVD03_VARV	PROTEIN D3	VACCINIA VIRUS (STRAIN WR)	123-157							
PVD09_VACCC	PROTEIN D9	VARIOLA VIRUS	126-160							
PVD09_VACCV	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	126-160							
PVD09_VARV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	126-160							
PVD10_FOWPI	PROTEIN D9	VARIOLA VIRUS	126-160							
PVD10_SFVKA	PROTEIN D10	FOWLPOX VIRUS (STRAIN FP-1)	65-99	188-222						
PVD10_VARV	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	4-52							
PVDBP_CAMVC	PROTEIN D10	VARIOLA VIRUS	67-105							
PVDBP_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	1-35							
PVDBP_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DAH)	1-35							
PVDBP_CAMVN	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	1-35							
PVDBP_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	1-35							
PVE02_VACCC	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	1-35							
PVE02_VACCV	PROTEIN E2	VACCINIA VIRUS (STRAIN COPENHAGEN)	282-316							
PVE02_VARV	PROTEIN E2	VACCINIA VIRUS (STRAIN WR)	282-316							
PVE03_VACCC	PROTEIN E3	VARIOLA VIRUS	17-61							
PVE03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-61							
PVE03_VARV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)								

PCGENE	ALLNIOTIS	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS								
PVE03_VACCC	PROTEIN E3	VARIOLA VIRUS	17-61							
PVE03_VACCD	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-83							
PVE03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN DAIREN I)	38-103							
PVE03_VARV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	38-103							
PVE06_VACCC	PROTEIN E6	VARIOLA VIRUS	38-103							
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-139	232-266						
PVE06_VARV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	105-139	232-266						
PVE10_NPVAC	PROTEIN E6	VARIOLA VIRUS	105-139	367-401						
PVE1_HPV1A	EARLY 18.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	112-163							
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	137-171							
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	56-90							
PVE1_HPV35	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	33-67	133-167						
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	56-90							
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	59-96							
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	55-89	312-346						
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	25-87							
PVE1_HPV68	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	33-67	118-174						
PVE1_PAPVE	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 68	265-299							
PVE26_NPVAC	E1 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	176-210							
PVE3_CRPVK	EARLY 23.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	72-117							
PVE3_HPV05	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANS	3-44							
PVE3_HPV08	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	5-57	276-310	342-383	437-471				
PVE3_HPV16	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	5-55	148-182						
PVE3_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	315-349						
PVE3_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	65-100							
PVE3_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	3-37	159-193						
PVE3_HPV31	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	13-47	159-193						
PVE3_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	61-103							
PVE3_HPV35	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	63-101	297-331						
PVE3_HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	62-106	158-192						
PVE3_HPV41	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	74-110	323-357						
PVE3_HPV47	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	6-54							
PVE3_HPV51	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	5-55	148-182						
PVE3_HPV57	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	134-191							
PVE3_HPV58	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	13-47	179-213						
PVE3_HPV5B	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	2-36							
PVE3_PAPVD	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	5-57							
PVE3_PAPVE	PROBABLE E2 PROTEIN	DEER PAPILLOMAVIRUS	107-141							
PVE3_PCPV1	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	112-150							
PVE3_RVDV1	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	318-341							
PVE39_NPVAC	E2 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	62-106	307-341						
PVE4_NPVOP	EARLY 39 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	20-57							
PVE4_HPV18	EARLY 39 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	119-156							
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	42-86							
PVE5_HPV5B	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	63-97							
PVEF_GVTN	VIRAL ENHANCING FACTOR (VEF) (104 KD GLYCOP	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	681-719							
PVENV_BEV	ENVELOPE PROTEIN	BERNE VIRUS (BEV)	195-239							
PVENV_DHV1	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	318-366							
PVENV_MCV1	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCV1)	233-286							
PVENV_MCV2	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCV11)	233-286							
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR (SURFACE	THOGOTO VIRUS (THO)	313-354							
PVENV_VACCC										

PGENE	ALLNOTES	All Viruses (no Bacteriophage)								
		VIRUS	AREA1	AREA1	AREA2	AREA1	AREA5	AREA1	AREA2	AREA3
UL CRANE	PROTEIN		237-295							
PVESV_VACCI	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K)	VACCINIA VIRUS (STRAIN COPENHAGEN)	237-295							
PVESV_VACCP	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K)	VACCINIA VIRUS (STRAIN IHD-J)	237-295							
PVESV_VACCV	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K)	VACCINIA VIRUS (STRAIN L-IVP)	237-295							
PVESV_VARV	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K)	VACCINIA VIRUS (STRAIN WR)	237-295							
PVE35_NPVAC	MAJOR ENVELOPE PROTEIN (37 KD PROTEIN) (P37K)	VARIOLA VIRUS								
PVT01_VACCC	ECORI-T SITE PROTEIN ETS	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (1-53								
PVT01_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN), AND VACCINIA VIRUS	46-80	124-158						
PVT01_VACCC	PROTEIN F1 (FRAGMENT)	VACCINIA VIRUS (STRAIN WR)	46-80	124-158						
PVT01_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	71-110							
PVT01_VARV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	71-110							
PVT05_VACCC	PROTEIN F4	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-129	202-320						
PVT05_VACCP	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	81-129	202-320						
PVT05_VACCV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	81-129	202-321						
PVT05_VARV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	81-122	201-322						
PVT06_VARV	PROTEIN F4	VARIOLA VIRUS	8-44							
PVT11_VACCC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-258	269-315						
PVT11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	213-254	265-311						
PVT11_VARV	PROTEIN F11	VARIOLA VIRUS	41-75	269-315						
PVT12_VACCC	PROTEIN F12	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67	102-143	199-236	350-388	544-581			
PVT12_VACCP	PROTEIN F12	VACCINIA VIRUS (STRAIN L-IVP)	1-67	102-143	199-236	350-388	544-581			
PVT12_VARV	PROTEIN F12	VARIOLA VIRUS	1-67	199-236	350-388	547-581				
PVT16_VACCC	PROTEIN F16	VACCINIA VIRUS (STRAIN COPENHAGEN)	135-194							
PVT16_VACCP	PROTEIN F16	VACCINIA VIRUS (STRAIN L-IVP)	135-194							
PVT16_VARV	PROTEIN F16	VARIOLA VIRUS	1-43							
PVTP3_FOWPV	PROTEIN FP3	FOWLPOX VIRUS	139-172	239-273						
PVTP7_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	23-57							
PVTPL_FOWPI	FPLEFT PROTEIN (FRAGMENT)	FOWLPOX VIRUS (STRAIN FP-1)	37-111							
PVTU5_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-64							
PVTU5_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	10-64							
PVG01_HSV11	14 KD FUSION PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	271-306	312-363	591-647	730-764				
PVG01_VACCC	HYPOTHETICAL GENE 1 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	201-239							
PVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	240-278							
PVG01_VARV	PROTEIN G1 (FRAGMENT)	VARIOLA VIRUS	201-239							
PVG01_HSVEB	PROTEIN G1	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	143-177							
PVG01_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A) (EHV-1)	143-177							
PVG03_VARV	GENE 3 PROTEIN (ORF L1)	VARIOLA VIRUS	64-98							
PVG05_VACCC	PROTEIN G3	VACCINIA VIRUS (STRAIN COPENHAGEN)	117-158	235-289	355-389					
PVG05_VARV	PROTEIN G3	VARIOLA VIRUS	117-158	235-289	355-389					
PVG06_HSV11	PROTEIN G5	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	61-109							
PVG07_HSV11	HYPOTHETICAL GENE 6 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	89-103							
PVG07_VACCC	HYPOTHETICAL GENE 7 MEMBRANE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-175	324-358						
PVG07_VARV	PROTEIN G7	VARIOLA VIRUS	114-175	324-358						
PVG09_VACCC	PROTEIN G9	VACCINIA VIRUS (STRAIN COPENHAGEN)	304-338							
PVG09_VACCV	PROTEIN F1 (PROTEIN G9) (FRAGMENT)	VACCINIA VIRUS (STRAIN WR)	304-338							
PVG09_VARV	PROTEIN F1 (PROTEIN G9)	VARIOLA VIRUS	61-97							
PVG10_HSV11	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	11-45							
PVG12_SPV1R	GENE 12 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	58-95							
PVG16_HSV5A	HYPOTHETICAL GENE 16 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	92-139	177-211						
PVG17_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	174-208	215-256						
PVG18_HSV11	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	407-441							
PVG1L_AMEPV	G1L PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)								
PVG1_SPV1R										

PCGENE	ALLNOTES	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	136-170	256-297	320-357					
PVG22_IISVII	CAPSID PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	287-321							
PVG24_IISVII	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	117-158	437-629	660-892	899-1055			1	
PVG23_IISVII	HYPOTHETICAL GENE 24 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	7-72	74-108						
PVG28_IISVII	HYPOTHETICAL GENE 27 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	164-219							
PVG2R_AMEPV	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	253-290							
PVG3_SPV1R	HYPOTHETICAL G3R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	29-63	186-218						
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	222-256	285-326						
PVG31_IISVII	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	255-310							
PVG34_IISVII	HYPOTHETICAL GENE 33 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	149-183							
PVG35_IISVII	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	345-379							
PVG37_IISVII	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	17-90							
PVG38_IISVII	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV	435-472							
PVG10_IISVII	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	84-118							
PVG1_SPV1R	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	124-158	266-300						
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	8-49	162-196	203-244					
PVG40_IISVII	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	6-54	87-121						
PVG40_IISVSA	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	116-150	262-296	324-361	643-677				
PVG46_IISVII	HYPOTHETICAL GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	121-162							
PVG48_IISVII	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	45-86	939-1078	1251-1321					
PVG48_IISVSA	HYPOTHETICAL GENE 48 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	169-207							
PVG49_IISVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-417	611-666	733-767					
PVG4R_AMEPV	HYPOTHETICAL GENE 49 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-102							
PVG4_SPV4	G4R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	4-38							
PVG51_IISVII	GENE 4 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	89-130							
PVG51_IISVSA	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	34-73	89-123						
PVG53_IISVII	GENE 51 GLYCOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	29-70	123-157	162-196					
PVG54_IISVII	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	67-127							
PVG55_IISVII	HYPOTHETICAL GENE 54 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	355-396							
PVG55_IISVSA	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	101-135							
PVG56_IISVII	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	126-178							
PVG59_IISVII	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	151-192	578-612	644-678	750-784	846-880	1111-1145		
PVG59_HSVSA	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	10-72	89-123						
PVG5_SPV1R	GENE 59 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	169-209							
PVG61_IISVII	GENE 5 PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	65-103							
PVG63_IISVII	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	265-299							
PVG65_IISVII	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	546-584							
PVG66_IISVII	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	805-839	1213-1254						
PVG67_IISVII	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	354-388	328-410						
PVG68_IISVII	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	370-413	501-546	1321-1369	1478-1541				
PVG72_IISVII	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	245-288							
PVG75_IISVII	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	447-484	723-757	912-949					
PVG8_SPV1R	HYPOTHETICAL GENE 75 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	271-305	388-422						
PVGF1_IDVB	GENE 8 PROTEIN	SPIROPLASMA VIRUS SPVI-R8A2 B	3-51							
PVGIII_HCMVA	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (I	142-179	1233-1267	2119-2156	3388-3424	3475-3513	3517-3556	3761-3795	
PVGL1_CVPR8	GLYCOPROTEIN E1/E3 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)								
PVGL2_CVBF	E1 GLYCOPROTEIN PRECURSOR (MATRIX GLYCOP	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRI	212-257							
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN F15	642-676	850-885	993-1088	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN L9)	850-885	993-1109	1263-1305					
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN LY-138)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN MEBUS	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN QUEBEC)	642-676	850-885	993-1109	1263-1305				

PCGLINE	ALIAS(ES)	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	BOVINE CORONAVIRUS (STRAIN VACCINE)	642-816	850-885	993-1109	1265-1305				
PVGL2_CVH14	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	HUMAN CORONAVIRUS (STRAIN 229E)	770-916	1015-1113						
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS NDIV (STRAIN WILD TYPE 4) (MDIV-4)	643-814	1001-1117	1270-1315					
PVGL2_CVMJHC	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS NDIV (STRAIN A59)	595-812	949-1019	1218-1265					
PVGL2_CVMJHM	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS NDIV (STRAIN JHMV / VARIANT CL-2)	643-814	1001-1117	1270-1315					
PVGL2_CVMJHH	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	MURINE CORONAVIRUS NDIV (STRAIN JHM)	593-743	860-976	1129-1174					
PVGL2_CVPFS	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-482	692-733	889-921	1040-1186	1332-1389		
PVGL2_CVPMI	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-482	692-733	889-921	1040-1186	1332-1389		
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	70-110	446-480	690-731	887-921	1018-1184	1330-1387		
PVGL2_CVPFU	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	446-480	690-731	887-921	1018-1184	1330-1387		
PVGL2_CVPRI	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	448-509	663-699	816-962	1128-1165			
PVGL2_CVPRM	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/133004 / BRU)	224-258	448-509	663-699	816-962	1128-1165			
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RAV) (PRCV)	69-110	446-480	690-731	887-921	1018-1184	1330-1387		
PVGL2_ERV	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	69-110	446-480	690-731	887-921	1018-1184	1330-1387		
PVGL2_FIPV	PROBABLE MEMBRANE GLYCOPROTEIN		68-102							
PVGL2_IBVB	E1 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	189-245	451-485	693-736	892-926	1043-1189	1355-1392		
PVGL2_IBVD	E1 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D/92)	791-905	1037-1091						
PVGL2_IBVD2	E1 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	637-678	772-904	1016-1090					
PVGL2_IBVK	E1 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	731-905	1031-1091						
PVGL2_IBVM	E1 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	637-678	772-904	1016-1090					
PVGLB_HCMVA	E1 GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	637-678	772-904	1016-1090					
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	41-88	128-162	438-478	844-878				
PVGLB_HSV11	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	32-88	128-162	433-478	841-879				
PVGLB_HSV1F	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	128-890							
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	127-889							
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	127-889							
PVGLB_HSV1H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG))	128-890							
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SAR)	128-890							
PVGLB_HSV6U	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	127-871							
PVGLB_HSVB1	GLYCOPROTEIN B	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	33-71	185-223						
PVGLB_HSVB2	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	859-913							
PVGLB_HSVBC	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BIV)	440-474	848-902						
PVGLB_HSVE1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	861-900							
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS51A)	542-576	911-961						
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	476-511	847-900						
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	542-576	911-961						
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB49)	542-576	911-961						
PVGLB_HSVGD	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	542-576	910-960						
PVGLB_HSV1A	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	390-435	649-683	787-845					
PVGLB_MDV1S	GLYCOPROTEIN B PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	340-388	608-647						
PVGLB_PRVTF	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	206-260	427-475	691-734	744-778	860-894			
PVGLB_V2VD	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUSKHAUSER / BECKE	847-881							
PVGLC_HSV11	GLYCOPROTEIN B PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	92-133	196-430	109-867					
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510							
PVGLC_HSV1P	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510							
PVGLC_HSV1S	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1)	443-476							
PVGLC_HSVB1	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	443-477							
PVGLC_HSVBC	GLYCOPROTEIN C PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	235-269							
PVGLC_HSVEB	GLYCOPROTEIN GIII PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KEN	112-218							
PVGLC_HSVGB	GLYCOPROTEIN C PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	61-97							
PVGLC_HSVGD	SECRETORY GLYCOPROTEIN GP53-45 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	61-97							
PVGLC_HSVMG	SECRETORY GLYCOPROTEIN GP53-45 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	61-94							
PVGLC_HSVMM	SECRETORY GLYCOPROTEIN GP53-45 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN CVI)								

PUGENE	ALLSMOTIF	All Viruses (no Bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVGLC_PRVF	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	63-91							
PVGLC_VZVD	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE	103-235							
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	280-321							
PVGLD_HSVEA	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	280-321							
PVGLD_HSVEB	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	89-123							
PVGLD_HSVEK	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KEN	139-173							
PVGLE_HSVEI	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	139-173							
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	111-145							
PVGLF_BRSVA	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-159							
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	146-202	504-545						
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGE	146-202	267-302	506-547					
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	146-202	267-302	506-558					
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	228-297	340-381	568-602					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	116-203	267-302	506-549					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2	116-202	267-302	506-549					
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAI	116-202	267-302	506-547					
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	116-202	267-302	506-549					
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON) AND (STRAIN HALLE)	116-184	228-269	452-500					
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	119-187	231-272	455-503					
PVGLF_MUMPI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	116-184	228-269	452-500					
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-56	103-179	235-272	447-502				
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-56	103-179	235-272	447-502				
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-56	103-179	235-272	447-502				
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	20-56	103-179	235-272	447-502				
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	117-182	231-272	426-513					
PVGLF_NDVFD	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	122-182	231-272	426-517					
PVGLF_NDVH	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	117-182	231-272	426-517					
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BI-HITCHNER/47)	122-182	231-272	426-517					
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	133-182	238-272	426-517					
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	133-182	231-272	426-517					
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	117-182	231-272	426-513					
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	122-182	231-272	433-513					
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	117-182	231-272	426-517					
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B/48)	122-182	231-272	426-517					
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	122-182	231-272	426-513					
PVGLF_PHOHC	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	29-63	197-266	309-350	533-581				
PVGLF_PI2H	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	123-174	207-267	459-503					
PVGLF_PI2HG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	93-183	477-528						
PVGLF_PI2HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	93-183	477-528						
PVGLF_PI2B	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	93-183	477-528						
PVGLF_PI3H4	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	117-182	207-241	456-518					
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	117-182	207-241	462-532					
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KADETE O)	112-180	224-265	448-493					
PVGLF_SENDI	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	112-180	224-265	448-506					
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	127-188	211-271	463-533					
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	127-188	211-271	463-533					
PVGLF_SENDI	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	127-188	211-271	463-533					
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	127-188	211-271	463-533					
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	127-188	211-271	463-533					
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	96-136	454-508						
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	103-171	241-275	451-487					
PVGLG_BEV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS (	105-141	190-224	457-498					

PEGENE	ALLNOTES	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
[illegible]	PROTEIN	VIRUS	106-611						
PVGLG_BOVC	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	10-70	104-138					
PVGLG_BIRSV1	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGE	10-81						
PVGLG_BIRSV2	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	10-81						
PVGLG_BIRSV3	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB044)	10-85						
PVGLG_BIRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB1114)	10-85						
PVGLG_BIRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB5957)	10-107						
PVGLG_BIRSV6	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6190)	10-85						
PVGLG_BIRSV7	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6296)	10-85						
PVGLG_BIRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSB6814)	10-85						
PVGLG_BIRSVA	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAI	10-81						
PVGLG_BIRSVL	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	10-67						
PVGLG_BIRSVE4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRA	23-85						
PVGLG_SIGHA	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	371-305						
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR	SIGMA VIRUS	326-381	404-498					
PVGLG_VISV0	SPIKE GLYCOPROTEIN PRECURSOR	SONCHUS YELLOW NET VIRUS	488-533						
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	385-397						
PVGLH_EBV	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C	476-510						
PVGLH_HCMVA	GLYCOPROTEIN GPH PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	53-87	160-201	336-380	651-694			
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	103-137	270-311	691-741				
PVGLH_HSV11	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	102-136	692-740					
PVGLH_HSV1E	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	447-481						
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	447-481						
PVGLH_HSV8C	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN GS)	337-406						
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	364-418						
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	334-379	414-455					
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HV	337-372	403-448					
PVGLH_PRVKA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	332-46	374-453	664-712				
PVGLH_PRVNJ	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	440-474						
PVGLH_PRVPJ	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN KAPLAN)	226-260						
PVGLH_V2VD	GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN NIA-3)	226-260						
PVGLI_HCMVA	PROBABLE GLYCOPROTEIN H PRECURSOR	PSEUDORABIES VIRUS (STRAIN RICE)	226-260						
PVGLI_HCMVA	INTERMEDIATE EARLY GLYCOPROTEIN PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	435-506						
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-111	233-319					
PVGLM_BUNLT	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	512-567	603-737	1228-1262				
PVGLM_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	643-677	916-950					
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	643-677						
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	140-174	304-383	901-939				
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	937-989	1239-1300					
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	693-727						
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	72-106						
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	72-106						
PVGLM_INSV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	72-106						
PVGLM_PHV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	1067-1101						
PVGLM_PTPV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	93-111						
PVGLM_SEOUA	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	149-231						
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	693-727						
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN B22)	694-728						
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11)	693-727						
PVGLP_BEFV	NONSTRUCTURAL GLYCOPROTEIN GNS PRECURSO	BOVINE EPHEMERAL FEVER VIRUS	277-414	513-569					
PVGLX_PRVPJ	PEPLOMER GLYCOPROTEIN PRECURSOR	BEAN VIRUS	43-82	90-124	622-656	1128-1220			
PVGLY_BUNSH	SECRETED GLYCOPROTEIN GX	PSEUDORABIES VIRUS (STRAIN RICE)	420-461						
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	RUNIN ARENAVIRUS	301-349						

PEGENE	ALLANOTES	AB Viruses (no bacteriophage)								
FILE_NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7	AREA8
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	118-360	118-423						
PVGLY_LYCVA	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	118-361	118-423						
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON	133-367	133-432						
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	134-138	133-367	395-432					
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPEIA VIRUS	116-359							
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENA VIRUS	114-339							
PVGLY_TACV5	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	115-363							
PVGLY_TACV3	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V5)	100-351	383-416						
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	100-350	381-415						
PVGNB_CPAIV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	100-351	383-416						
PVGNN_CPAIV	GENOME POLYPROTEIN [1]	COWPEA MOSAIC VIRUS	835-869							
PVGNN_CPSMV	GENOME POLYPROTEIN N1	COWPEA MOSAIC VIRUS	160-201							
PVGNN_RCMV	GENOME POLYPROTEIN N1	COWPEA SEVERE MOSAIC VIRUS (STRAIN UG)	193-226	258-292	878-915					
PVGP3_EDV	GENOME POLYPROTEIN N1	RED CLOVER MOTTLE VIRUS	837-871	912-946						
PVGP_EBOV	PROBABLE MEMBRANE ANTIGEN GP35	EPSTEIN-BARR VIRUS (STRAIN B95-8)	94-149							
PVGP_MABVV	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	210-321	334-368	469-503					
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	562-596							
PVH02_VACCC	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	562-596							
PVH03_VACCV	LATE PROTEIN H3	VACCINIA VIRUS (STRAIN COPENHAGEN)	58-92							
PVH03_VARV	LATE PROTEIN H3	VACCINIA VIRUS (STRAIN WR)	58-94							
PVH03_VACCC	LATE PROTEIN H3	VARIOLA VIRUS	58-92							
PVH05_VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-185							
PVH05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	118-185							
PVH05_VARV	PROTEIN H5	VARIOLA VIRUS	116-203							
PVH5L_LSV	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	136-160							
PVH5P_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	216-239							
PVH5_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	216-239							
PVI01_VACCV	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	190-193	210-244						
PVI01_VARV	PROTEIN I1	VACCINIA VIRUS (STRAIN WR)	190-193	210-244						
PVI06_VACCV	PROTEIN I6	VARIOLA VIRUS	190-193	210-244						
PVI06_VARV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	58-92							
PVI07_VARV	PROTEIN I6	VARIOLA VIRUS	58-92							
PVI08_VACCC	PROTEIN I7	VARIOLA VIRUS	373-407							
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	548-589							
PVI08_VARV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	548-589							
PVIE1_IICMVA	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	548-589							
PVIE1_IICMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	78-112	171-205	368-402	416-450				
PVIE1_MCMVS	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	78-112	171-205	368-402	416-450				
PVIE2_MPVOP	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	244-297							
PVIEN_NPVAC	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	94-128	305-305						
PVIF_CAEVC	IMMEDIATE-EARLY REGULATORY PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	277-407							
PVIF_FIVPE	VIRION INFECTIVITY FACTOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	23-92							
PVIF_FIVSD	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	53-94							
PVIF_IVI1A3	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	23-80							
PVIF_IVI1B1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	1-42	62-96						
PVIF_IVI1B5	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OHIO,BRU,HXB2,PV	1-42	62-96						
PVIF_IVI1EL	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	1-42	62-96						
PVIF_IVI1R	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	1-42	62-96						
PVIF_IVI1MA	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ITCSF ISOLATE)	1-42	62-96						
PVIF_IVI1MN	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-16							
PVIF_IVI1NS	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	1-42	62-96						
PVIF_IVI1NA	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-1 ISOL	1-42	62-96						

PC GENE	ALLNOTES	All Viruses (no bacteriophage)		AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
ENTRY NAME	PROTEIN	VIRUS	AREA 1	62-96						
PVIF_IIVIND	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE NIT-A)	1-42							
PVIF_IIVIOY	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (INDIA ISOLATE)	1-42	62-96						
PVIF_IIVIBU	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BU1) ISOLATE)	1-42	62-96						
PVIF_IIVIBU	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAZIL ISOLATE)	1-42	62-96						
PVIF_IIVIZI	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDA)	1-42							
PVIF_IIVI16	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (123-CDC-210 ISOLA	1-42	62-96						
PVIF_IIVZD2	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	1-42	62-96						
PVIF_IIVNZ	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.1)	193-195							
PVIF_OIVVS	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	192-193							
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	163-197							
PVIF_SIVAG	VIRION INFECTIVITY FACTOR	OVINE LENTIVIRUS (STRAIN SA-OLVV)	44-114							
PVIF_SIVAT	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	2-58	150-202						
PVIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	17-58							
PVIF_SIVAT	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/ CLONE GA	2-56	140-187						
PVIF_SIVCZ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	20-58	150-195						
PVIF_SIVGB	VIRION INFECTIVITY FACTOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS	1-42							
PVIAP_IISV11	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE G01)	1-39							
PVIAP_HSVSB	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	85-114							
PVIAP_HSVSA	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	148-182	335-369						
PVIAP_VZVD	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	86-119							
PVIAT_SSV1	PROBABLE INTEGRAL MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-151	135-189	261-301					
PVI01_VACCC	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	85-130	138-172						
PVI01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56							
PVI01_VARV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56							
PVK01_VACCC	PROTEIN J1	VARIOLA VIRUS	22-56							
PVK01_VACCV	PROTEIN K1	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-82							
PVK01_VACCV	PROTEIN K1	VACCINIA VIRUS (STRAIN WR)	38-82							
PVL02_VACCC	PROTEIN K2	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	115-149							
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-81							
PVL02_VARV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	47-82							
PVL1_CRPVK	PROTEIN L2	VARIOLA VIRUS	47-81							
PVL1_FPVL	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANS	261-293	331-383						
PVL1_IDPV05	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-90							
PVL1_IDPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	255-293							
PVL1_IDPV1A	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	259-292							
PVL1_HPV47	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	249-279							
PVL1_PAPVD	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	333-391							
PVL1_REOVD	PROBABLE L1 PROTEIN	DEER PAPILLOMAVIRUS	22-57							
PVL1_IDPV05	MAJOR CORE PROTEIN LAMBDA 1	REOVIRUS (TYPE 3 / STRAIN DEARING)	94-142	417-471						
PVL1_IDPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE	241-275							
PVL1_IDPV16	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	256-292							
PVL1_IDPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	295-333							
PVL1_IDPV31	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	245-279							
PVL2_IDPV31	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	288-326							
PVL2_IDPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	292-333							
PVL2_IDPV16	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	241-275							
PVL2_HPV58	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	291-333							
PVL3_REOVD	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	241-275							
PVL3_REOVI	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING)	107-148	1112-1178						
PVL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 2 / STRAIN JONES)	1112-1178							
PVL3N_LEVI	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	107-148	331-365	1112-1178					
PVM01_VACCC	L3N PROTEIN	TIPULA IRIDESCENT VIRUS	104-180	198-230						

PFGENE	ALLAIOTIS	AP Viruses (no bacteriophages)							
ENV_CRANE	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVAII_REOVL	PROTEIN N1	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-36						
PVAII_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	237-321						
PVAI2_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN DEARING)	416-450	619-661					
PVAI2_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	416-450	618-661					
PVAI2_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN DVIONE5)	416-450	618-661					
PVAII_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	416-450	618-661					
PVAIA2_BRSVA	MAJOR NONSTRUCTURAL PROTEIN NU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	135-190	337-371	522-558	618-690			
PVSIA2_HRSVA	MATRIX GLYCOPROTEIN N2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	42-90						
PVSIA2_TRTV	MATRIX GLYCOPROTEIN N2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	42-90						
PVSIA2_CDVO	MATRIX GLYCOPROTEIN N2	TURKEY RHINOTRACHEITIS VIRUS	36-70						
PVSIA1_INCJ	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	193-234						
PVSIA1_NDVA	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JHB)	75-114	151-208					
PVSIA1_NDVD	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	110-158						
PVSIA1_PJIB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	324-358						
PVSIA1_PIH4	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	99-133	204-252					
PVSIA1_RABVA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NH 47885)	99-133	204-252					
PVSIA1_RABVC	MATRIX PROTEIN	RABIES VIRUS (STRAIN AVO1)	69-103						
PVSIA1_RABVE	MATRIX PROTEIN	RABIES VIRUS (STRAIN CVS-11)	69-103						
PVSIA1_RABVN	MATRIX PROTEIN	RABIES VIRUS (STRAIN ERA)	69-103						
PVSIA1_RABV7	MATRIX PROTEIN	RABIES VIRUS (STRAIN NISHIGAHARA RC-HL)	69-103						
PVSIA1_RABV5	MATRIX PROTEIN	RABIES VIRUS (STRAIN PV)	69-103						
PVSIA1_SYNV	MATRIX PROTEIN	RABIES VIRUS (STRAIN SAD B19)	69-103						
PVSIA1_VSVIG	MATRIX PROTEIN	SONCHUS YELLOW NET VIRUS	246-280						
PSNE1_CVDN	MATRIX PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C)	190-223						
PSNE1_CVPFS	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	135-209						
PSNE1_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	98-146	212-257					
PSNE1_CVPAN	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	212-257						
PSNE1_CVTKE	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RASH)	212-257						
PSNE1_IBV	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	28-62	175-209					
PSNE1_IBV6	E1 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	212-257						
PSNE1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	21-55	177-218					
PSNE1_IBVBJ	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-55	177-218					
PSNE1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE N	21-55	177-218					
PSNE1_EBV	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN K-BIRD)	177-218						
PSNP_CANVC	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	16-54						
PSNP_CANVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	187-234	270-324					
PSNP_CANVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D-II)	187-234	270-324					
PSNP_CANVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	187-234	270-324					
PSNP_CANVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	187-234	270-324					
PSNP_CANVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	187-234	270-324					
PSNP_CERV	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	187-234	270-324					
PSNP_FMVD	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	213-246						
PSNP_SOCMV	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	217-251						
PSNP_IDPDB	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	76-110						
PSNS2_IDPDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S	172-211	324-361					
PSNS2_IDPDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	171-212	323-360					
PSNS2_IDPBW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	224-275	289-323					
PSNS2_IDPB3	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S)	172-211	324-361					
PSNS2_IDPBE	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	210-244						
PSNS2_WHVI	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328						
PSNS2_WHV19	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	208-242						
PSNS2_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 39	213-247						

FEATURE	ANNOTATION	AB Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
mat_peptide	1..247	VIRUS	1..247							
PVSP1_CHVSI	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	1..247							
PVSP1_CHVSI	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1 (INFECTIOUS CLONE)	1..247							
PVNS1_DHVSI	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/1313/61)	201..335							
PVNS1_IAANN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	92..126	174..232						
PVNS1_IABAN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	92..126	174..232						
PVNS1_IACAO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	92..126	174..232						
PVNS1_IAICW	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/CAMELID/MONGOLIA/3/81)	11..79							
PVNS1_IAIPR	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND 1918	92..126	174..232						
PVNS1_IAIPR	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND 1918	92..126	174..232						
PVNS1_IAIPW	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	92..126	174..232						
PVNS1_IAIRE	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WLY/HRD	92..126	174..232						
PVNS1_IAKE1	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	92..126	174..232						
PVNS1_IALE2	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	92..126	174..232						
PVNS1_IASIN	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ASILARD/NEW YORK/939/78)	92..126	174..232						
PVNS1_IAPHC	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PORT CHALMERS/1/73)	92..126	174..232						
PVNS1_IAPUC	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	92..126	174..232						
PVNS1_IAUDO	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	92..126	174..232						
PVNS1_IAWIL	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	92..126	174..232						
PVNS1_IAZJI	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	92..126	174..232						
PVNS1_INBAD	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	135..209							
PVNS1_INBLE	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	135..209							
PVNS1_INBS1	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	135..209							
PVNS2_INBAC	MATRIX (M1) PROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	135..209							
PVNS2_INBAD	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTE	132..184							
PVNS2_INBLE	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	132..184							
PVNS2_INBS1	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	132..184							
PVNS2_MYXVL	PROBABLE MATRIX (M2) PROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	132..184							
PVNS1_VACCC	32 KD PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	46..80	145..197						
PVNS1_VACCV	PROTEIN N1	VACCINIA VIRUS (STRAIN COPENHAGEN)	64..112							
PVNS4_ROTBS	PROTEIN N1	VACCINIA VIRUS (STRAIN WR)	64..112							
PVNS4_ROTPC	NONSTRUCTURAL PROTEIN NS34	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64..169	121..169						
PVNS4_AAV3	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64..117	121..169						
PVNC4_RSV	DNA REPLICATION PROTEIN	ADENO-ASSOCIATED VIRUS 3	91..135	217..331						
PVNC4_PVBO	MAJOR NONCAPSID PROTEIN	RICE STRIPE VIRUS	139..163							
PVNC5_ADVG	PROBABLE NONCAPSID PROTEIN NP1	BOVINE PARVOVIRUS	221..251							
PVNC5_AEDEV	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	19..60	270..304						
PVNC5_EPV19	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GRV 003 003)	276..319	321..371	383..440	733..760	780..849			
PVNC5_MEVA	NONCAPSID PROTEIN NS-1	FELINE PANLEUKOPENIA VIRUS (STRAIN 193)	51..98							
PVNC5_MVMIM	NONCAPSID PROTEIN NS-1	MINK ENTERITIS VIRUS (STRAIN ABASHIRI)	53..98							
PVNC5_MVMIV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVMII)	53..98	261..297						
PVNC5_PVBO	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	53..87	259..297						
PVNC5_PAVCN	PROBABLE NONCAPSID PROTEIN NS1	BOVINE PARVOVIRUS	181..222							
PVNC5_PAVIB	NONCAPSID PROTEIN NS-1	CANINE PARVOVIRUS (STRAIN N)	53..98							
PVNC5_PAVIH	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	216..270							
PVNC5_PAVPN	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS 111	55..76	259..297						
PVNS1_BTV10	NONSTRUCTURAL PROTEIN NS1	PORCINE PARVOVIRUS (STRAIN NADL-2)	24..77	169..210	309..344					
PVNS1_BTV17	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	107..141							
PVNS1_BTV1A	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	107..141							
PVNS1_BTV1S	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	107..141							
PVNS1_BTV20	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	107..141							
PVNS1_EIDV3	NONSTRUCTURAL PROTEIN NS1	BLUETONGUE VIRUS (SEROTYPE 20 / ISOLATE AUSTRALIA)	107..141							
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRA	401..434							
PVNS1_IACAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	49..83							
PVNS1_IACKO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CAMELID/MONGOLIA/3	17..71							

PGENE	ALIGNMENTS	All Viruses (no bacteriophage)							
GENE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PVNS1_IACKI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	49-81						
PVNS1_IADAJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	46-80						
PVNS1_IADEI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	49-81						
PVNS1_IADUJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	46-80						
PVNS1_IAFON	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	46-80						
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	49-81						
PVNS1_IAFPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND (STRA	49-81						
PVNS1_IALEI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	49-81						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	46-80						
PVNS1_IANAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	49-81						
PVNS1_IANAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/158/76	49-81						
PVNS1_IANAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	49-81						
PVNS1_IANHN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6817/78	49-81						
PVNS1_IAPIO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MYNAH/HANEDA-TIA/1/76)	46-80						
PVNS1_IAPII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79	49-81						
PVNS1_IAPII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/131/79)	49-81						
PVNS1_IAPII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/288/78	49-81						
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	49-81						
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	49-81						
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETTLEHEM/GILL/71/4	49-81						
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	49-81						
PVNS1_IATRS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	49-81						
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61	46-80						
PVNS1_IAZII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/1972)	49-81						
PVNS1_IVBAC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	49-81						
PVNS1_IVBGA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/64 (COLD-ADAPTE	141-177						
PVNS1_IVBIK	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/GA/46)	141-177						
PVNS1_IVBIT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73), AND (STRAIN	143-177						
PVNS1_IVBID	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/ITI/84)	143-177						
PVNS1_IVBLE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	143-177						
PVNS1_IVBMD	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/MD/86)	143-177						
PVNS1_IVBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/MALAYSIA/5/88)	143-177						
PVNS1_IVBRU	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	143-177	277-333					
PVNS1_IVBSI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/RU/69)	139-173						
PVNS1_IVBSJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	143-177						
PVNS1_IVBVI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/64)	143-177						
PVNS1_IVBYA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/VICTORIA/1)	143-177						
PVNS1_AHSV9	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	143-177						
PVNS1_BTV17	NONSTRUCTURAL PROTEIN NS2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	67-101						
PVNS1_BTV1X	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 17/ISOLATE USA)	203-237						
PVNS1_CVMIH	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10)	203-237						
PVNS2_EIDV2	NONSTRUCTURAL PROTEIN NS2	AVIAN CORONAVIRUS IBV (STRAIN JDA)	71-105						
PVNS2_IAALA	NONSTRUCTURAL PROTEIN NS2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRA	206-272	276-311					
PVNS2_IAANA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77), AND (STRAIN A/	14-91						
PVNS2_IAANN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIN/ORJE/69/76)	14-91						
PVNS2_IACHI	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60), AND (STRAIN	14-91						
PVNS2_IACKG	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	14-91						
PVNS2_IACKI	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	14-79						
PVNS2_IADAJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	11-90						
PVNS2_IADEI	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	14-79						
PVNS2_IADUJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	11-90						
PVNS2_IAFOM	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	11-90						

PCGLINE	ALLNUCTS	All Viruses (no bacteriophage(s))	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVNS1_IAIAV	PROTEIN	VIRUS							
PVNS1_IAIOV	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AFORT MONMOUTH/1/47)	14-93						
PVNS1_IAIPR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AFORT WARREN/1/50)	14-93						
PVNS1_IALE2	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AFOWL PLAGUE VIRUS/ROSTOCK	14-93						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ALENINGRAD/134/57)	14-93						
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ALENINGRAD/1/47)	14-93						
PVNS1_IAMA8	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ANAHLARD/ALBERTA/18/76)	14-39						
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ANAHLARD/ALBERTA/2/77)	14-39						
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ANAHLARD/NEW YORK/6/77)	14-93						
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ANAHLARD/NEW YORK/6/77)	14-93						
PVNS1_IAP10	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ANMYNAJ/IANEDA-7/IAV/76)	11-90						
PVNS1_IAP11	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN APINTAIL/ALBERTA/119/79)	14-93						
PVNS1_IAP12	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN APINTAIL/ALBERTA/135/79)	14-39						
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN APINTAIL/ALBERTA/268/78)	14-93						
PVNS1_IAPUR	NONSTRUCTURAL PROTEIN NS3	INFLUENZA A VIRUS (STRAIN APUERTO RICO/8/34)	14-93						
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS3	INFLUENZA A VIRUS (STRAIN ATURKEY/BETTLEHEM-GILL/71/4	14-39						
PVNS1_IATRS	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ATURKEY/OREGON/71	14-39						
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AUSTRALIA/SOUTH AFRICA/41)	11-33						
PVNS1_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AUSSR/90/77)	14-93						
PVNS1_INBYA	NONSTRUCTURAL PROTEIN NS3	INFLUENZA B VIRUS (STRAIN BALEE/40	2-43	38-110					
PVNS1_INCII	NONSTRUCTURAL PROTEIN NS3	INFLUENZA B VIRUS (STRAIN BYAMAGATA/1/73)	2-43	39-119					
PVNS1_PVM	NONSTRUCTURAL PROTEIN NS3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	53-98						
PVNS1_AJ15VJ	NONSTRUCTURAL PROTEIN 2	PNEUMONIA VIRUS OF MICE	70-104						
PVNS1_AJ15V9	NONSTRUCTURAL PROTEIN NS3	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 2)	44-78	166-215					
PVNS1_BRD	NONSTRUCTURAL PROTEIN NS3	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	12-78	18-122	166-215				
PVNS1_CVPFS	NONSTRUCTURAL PROTEIN NS3	BROADHAVEN VIRUS	36-98	102-147					
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S	13-31						
PVNS4_RSV	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	11-33						
PVNS5_CVCAE	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	2-40						
PVNS7_CVTE1	NONSTRUCTURAL PROTEIN 1	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-43						
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 1	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	1-42						
PVNSC_CDVO	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	1-42						
PVNSC_MEASE	NONSTRUCTURAL PROTEIN C	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	10-84	95-152					
PVNSC_MEASI	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN EDMONSTON)	43-84						
PVNSC_MEASY	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN IP-1-CA)	43-84						
PVNSC_PI11D	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN YANAGATA-1)	43-84						
PVNSC_PI11C	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	133-167						
PVNSC_PI11D	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	133-167						
PVNSC_PI11E	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C1.57J)	133-167						
PVNSC_PI11H	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C1-1481)	40-71	133-167					
PVNSC_SEN06	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-113	161-199					
PVNSC_SENOH	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN 6/54)	133-167						
PVNSC_SENOZ	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN HARRIS)	133-167						
PVNSM_IM5V	NONSTRUCTURAL PROTEIN C	SENDAI VIRUS (STRAIN Z)	133-167						
PVNST_BUNGE	NONSTRUCTURAL PROTEIN NS-N1	IMPATIENS NECROTIC SPOT VIRUS (INSV)	44-103	202-296					
PVNST_BUNLJ	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS GERMISTON	34-75						
PVNST_BUNLC	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE (ISOLATE L74)	5-39						
PVNST_BUNV	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE	5-39						
PVNST_IAGV	NONSTRUCTURAL PROTEIN NS-S	MAGUARI VIRUS	33-69						
PVNST_TOSV	NONSTRUCTURAL PROTEIN NS-S	TOSCANA VIRUS (TOS)	144-181						
PVNST_UUK	NONSTRUCTURAL PROTEIN NS-S	UUKUNIEMI VIRUS (UUK)	139-173						
PVNUA_PRVRA	NONSTRUCTURAL PROTEIN NS-S	PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	1114-1175						
PVNUC_DHV11	PROBABLE NUCLEAR ANTIGEN	DHORI VIRUS (STRAIN INDIAN/1313761) (DHO)	209-249						
PVNUC_EBOV	NUCLEOPROTEIN								

PCGENE	ALLANOTES	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6
PVNUC_IAANA	NUCLEOPROTEIN	EBOLA VIRUS	191-223	227-261	328-369				
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRI/NORTH/69/76)	1-42	96-134	337-408				
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	337-408					
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	1-42	337-408					
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	1-42	96-134	337-408				
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	1-42	337-409					
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	1-42	96-134	337-408				
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	1-42	96-134	337-408				
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/7/60)	1-42	96-134	337-408				
PVNUC_IADK2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	1-42	96-134	337-408				
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAK/1/56)	1-42	96-134	360-408				
PVNUC_IADE3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	1-42	96-134	337-408				
PVNUC_IADK8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	1-42	96-134	337-408				
PVNUC_IADM1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/1/73)	1-42	96-134	337-408				
PVNUC_IADM4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	1-42	96-134	337-408				
PVNUC_IADN2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	1-42	96-134	337-408				
PVNUC_IADU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/2/74)	1-42	96-134	337-408				
PVNUC_IAEN3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/URKRAINE/2/60)	96-134	337-408					
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1/51)	1-42	337-409					
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	1-42	337-409					
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	337-408						
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/)	1-42	96-134	337-408				
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK	1-42	96-134	360-408				
PVNUC_IAGUI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	1-42	111-134	337-408				
PVNUC_IAGUJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/1/77)	1-42	337-408					
PVNUC_IAGUJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/704/77)	96-134	337-409					
PVNUC_IAGUK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/18/78)	1-42	96-134	337-409				
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/HAYLAND/1815/79)	1-42	96-134	337-409				
PVNUC_IAGUH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/ASTRAKHAN/213/84)	1-42	96-134	337-409				
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/MASSACHUSETTS/26/80)	1-42	96-134	337-409				
PVNUC_IAHIC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GUIZHOU/MINNESOTA/945/80)	1-42	96-134	337-409				
PVNUC_IAHII	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HUCKO/30/40)	1-42	337-409					
PVNUC_IAHLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/HILLIN/1/89)	1-42	96-134	337-408				
PVNUC_IAHOI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	1-42	96-134	337-408				
PVNUC_IAHOI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	1-42	96-134					
PVNUC_IAHOI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	1-42	337-409					
PVNUC_IAIPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/72)	1-42	337-409					
PVNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	96-134	337-408					
PVNUC_IAIXE	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-134	337-408				
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	1-42	337-409					
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/)	1-42	337-409					
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-134	337-408				
PVNUC_IAMN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	1-42	96-134	337-408				
PVNUC_IAMT4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	1-42	96-134	337-408				
PVNUC_IAMTA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/8/76)	1-42	96-134	337-408				
PVNUC_IAOIU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	1-42	337-409					
PVNUC_IAPAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/142/)	1-42	337-409					
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	1-42	96-134	337-408				
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	1-42	337-409					
PVNUC_IASEO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY	1-42	96-134	337-408				
PVNUC_IASHU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	1-42	96-134	337-401				
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/7/)	1-42	337-408					

GENE	ALLANTUS	All Viruses (no bacteriophage)							
GENE	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVNUC_IA1E1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	1-42	337-409					
PVNUC_IA1E1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/2/80)	1-42	96-154	337-408				
PVNUC_IA1KN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1641/81)	1-42	96-154	337-408				
PVNUC_IA1K0	NUCLEOPROTEIN		1-42	96-154	337-408				
PVNUC_IA1R5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	1-42	96-154	360-408				
PVNUC_IA1R1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	1-42	96-154	337-405				
PVNUC_IA1X7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/1872)	1-42	96-154	337-409				
PVNUC_IA1D0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	1-42	337-409					
PVNUC_IAUS5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	1-42	337-409					
PVNUC_IAV16	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	1-42	337-408					
PVNUC_IAW1N	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	337-408						
PVNUC_IAW1D	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/ANTARCTICA/2/80)	1-42	96-154	337-409				
PVNUC_IAW1L	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/1/78)	1-42	96-154	337-408				
PVNUC_IAW1S	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	1-42	337-409					
PVNUC_IA219	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/333/78)	1-42	96-154	337-408				
PVNUC_IA241	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/1973)	1-42	96-154	337-408				
PVNUC_IA2CA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/40)	1-42	96-154	337-408				
PVNUC_IA2D0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/31)	1-42	337-409					
PVNUC_IA2GE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/81)	1-42	96-154	337-409				
PVNUC_IA2I11	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	1-42	96-154	337-408				
PVNUC_IA2I13	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/9/76)	1-42	337-409					
PVNUC_IA2I14	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/128/82)	1-42	96-154	337-408				
PVNUC_IA2I1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/113/82)	1-42	96-154	337-408				
PVNUC_IA2I2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/243/76)	1-42	96-154	337-408				
PVNUC_IA2I3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	1-42	96-154	337-408				
PVNUC_IA2I1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/A19760/31)	1-42	96-154	337-408				
PVNUC_IA2J1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	1-42	96-154	337-408				
PVNUC_IA2J2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/243/76)	1-42	96-154	337-408				
PVNUC_IA2J3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/2/79)	1-42	96-154	337-408				
PVNUC_IA2J4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/144/81)	1-42	96-154	337-408				
PVNUC_IA2JA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/819489)	1-42	96-154	337-408				
PVNUC_IA2MA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MARYLAND/1/77)	1-42	96-154	337-408				
PVNUC_IA2NE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NEBRASKA/1/94)	1-42	96-154	337-408				
PVNUC_IA2O11	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/1/85)	1-42	96-154	337-408				
PVNUC_IA2U0N	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/511/78)	1-42	96-154	337-408				
PVNUC_IA2TE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	1-42	96-154	337-408				
PVNUC_IA2W1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	1-42	96-154	337-408				
PVNUC_IA2W2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	1-42	96-154	337-408				
PVNUC_INBAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	1-42	96-154	337-408				
PVNUC_INBAC	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66)	35-142	410-514					
PVNUC_INBAD	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	35-142	410-514					
PVNUC_INBLE	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	35-145	410-514					
PVNUC_INBS1	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	35-146	410-514					
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	35-142	410-514					
PVNUC_NIABVM	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	92-200	406-447					
PVNUC_NIABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	173-207	322-407					
PV001_VACCC	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	173-207	322-407					
PV001_VAAV	PROTEIN 01	VACCINIA VIRUS (STRAIN COPENHAGEN)	102-145	245-339	381-415				
PV001_FXMV	PROTEIN 01	VARIOLA VIRUS	102-145	245-339	381-415				
PV0R1_PMV	132 KD PROTEIN	FOXTAIL MOSAIC VIRUS	293-337						
PV0R1_PMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS (NMV)	1519-1535						
PV0R1_PVMA	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS (PMV)	1-39	299-337	1474-1532				
PV0R1_PVX	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN) (PVM)	597-638	682-739					
PV0R1_PVXCP	165 KD PROTEIN	POTATO VIRUS X (PVX)	516-550						

PC GENE	ALLMOTIFS	All Viruses (no bacteriophages)								
ID_NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVORF_SMYEA	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP) (PVX)	510-547							
PVORF_WCMVM	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYE	308-342	931-965						
PVORF_WCMVO	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M) (WCMV)	1240-1289							
PVP10_NPVAC	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	1240-1289							
PVP10_NPVOP	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	7-41							
PVP10_RBSDV	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	7-50							
PVP10_RGDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	339-382	395-429	506-556					
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	RICE GALL DWARF VIRUS (RGDV)	186-273							
PVP11_RDV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS (WTV)	220-254							
PVP11_WTV	NONSTRUCTURAL PROTEIN PNS11	RICE DWARF VIRUS (RDV)	25-80	273-314						
PVP12_RDV	NONSTRUCTURAL PROTEIN PNS11	WOUND TUMOR VIRUS (WTV)	16-74							
PVP12_WTV	NONSTRUCTURAL PROTEIN P11	RICE DWARF VIRUS (RDV))	140-181							
PVP18_WTVNJ	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (WTV)	68-108							
PVP19_IISVED	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	68-108							
PVP23_IICMVA	CAPSID ASSEMBLY AND DNA MATURATION PROTE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	189-231							
PVP23_IISV6U	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-82	146-180						
PVP24_EBOV	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	47-81							
PVP26_IISVEB	MEMBRANE-ASSOCIATED STRUCTURAL PROTEIN V	EBOLA VIRUS	166-200							
PVP26_IISVSA	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	36-77							
PVP26_NPVOP	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	41-76							
PVP26_VZVD	P26 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	118-159							
PVP2_AIISV4	CAPSID PROTEIN VP26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	47-81							
PVP2_BTVI0	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCI	136-188	270-304	410-465	614-662	684-720	976-1056		
PVP2_BTVII	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	168-225							
PVP2_BTVIJ	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	77-111	559-593						
PVP2_BTVIS	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	77-111	168-209						
PVP2_EHDVI	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-153	536-610	668-702					
PVP2_ROTBR	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	72-106	247-301	405-453	461-495	895-929			
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	2-94	482-516	523-557	607-635	675-754			
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	2-94	483-517	524-558	608-636	676-755			
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	17-97	492-526	533-567	617-658	685-764			
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	1-50	52-99	194-228	515-551	599-643	705-746		
PVP30_ASFE7	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	16-96	483-517	608-656	680-755				
PVP31_FRGIV	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75) (ASFV)	29-89							
PVP32_ASFB7	EARLY 31 KD PROTEIN	FROG VIRUS 3 (FV3)	227-261							
PVP33_EBOV	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN DA7IV) (ASFV)	29-89							
PVP33_NPVAC	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	80-119							
PVP33_NPVBAI	EARLY 35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	54-102							
PVP33_VACCC	EARLY 35 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS (BMNPV)	54-102	224-258						
PVP33_VACCP	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	140-181							
PVP33_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN L-IVP)	17-51							
PVP33_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	140-181							
PVP3_AIISV4	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	141-181							
PVP3_BTVI0	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCI	173-214	240-274	667-704					
PVP3_BTVII	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-255	853-894						
PVP3_BTVIA	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-255	853-894						
PVP3_EHDVI	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA	214-255	853-894						
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	208-246	798-832	851-892					
PVP3_GFLV	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	208-246	735-770	798-832	851-892				
PVP3_RDV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS (GFLV)	96-133							
PVP3_ROTPC	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	299-337	837-872						
PVP3_ROTSI	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	24-58	229-263	329-393	406-446	640-688			

ACCESSION	ALL MOTIFS	All Viruses (no bacteriophages)								
ENTRY NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVP40_EBV	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	26-76	244-278	331-365	451-492	662-696			
PVP40_HHSV11	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	433-467							
PVP40_HHSVEB	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	206-257	599-633						
PVP40_ILTVT	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	180-245							
PVP40_SCMVC	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V8	1-35	509-557						
PVP40_VZVD	CAPSID PROTEIN P40	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	437-498							
PVP41_NPVAC	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	167-246	486-522						
PVP41_ROTSI	STRUCTURAL GLYCOPROTEIN GP41	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	112-166							
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	1-35	484-518	528-630					
PVP4A_VACCC	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	1-35	237-518	531-646					
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	355-359	718-763	794-828	857-891				
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	262-296	355-359	718-763	794-828	857-891			
PVP4D_FOWPV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	355-389	719-764	795-829	858-892				
PVP4D_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS	111-172	296-330						
PVP4D_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-37	125-163	249-283					
PVP4D_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	3-37	125-163	249-283					
PVP4_BTV10	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	3-37	125-163	249-283					
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	579-617	619-653						
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	569-607	609-643						
PVP4_BTV2A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	569-607	609-643						
PVP4_NCDV	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	569-607	609-643						
PVP4_RDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	484-518	528-630						
PVP4_ROTD4	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS (RDV)	388-437	444-478	627-679					
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	1-35	112-146	338-379	484-518	528-653			
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	1-35	484-518	528-630					
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	1-35	112-146	338-379	484-518	528-653			
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	1-35	112-146	227-274	345-379	484-518	528-653		
PVP4_ROTHI	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	117-151	476-519						
PVP4_ROTHI5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	1-35	236-273	337-378	483-517	530-645			
PVP4_ROTHI6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RV-5)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHID	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	1-35	112-146	237-274	338-379	484-518	531-646		
PVP4_ROTHJ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN K8)	1-35	237-274	345-379	484-518	528-588			
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	1-35	337-378	483-517	527-652				
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	1-35	337-378	483-517	530-645				
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN McN1)	1-35	237-274	338-379	484-518	531-645			
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	1-35	236-273	337-378	483-517	527-652			
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RAV)	1-38	91-146	227-274					
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	1-35	236-273	337-378	483-517	530-644			
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70	1-35	237-273	344-378	483-517	527-652			
PVP4_ROTPS	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	1-35	237-273	344-378	483-517	527-652			
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	112-146	484-518	528-629					
PVP4_ROTPG	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	6-40	127-161	241-278	293-334	580-614			
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	1-35	236-273	337-378	483-517	530-564	569-638		
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	1-35	112-146	237-274	484-518	528-629			
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	1-38	112-146	237-274	338-379	484-522	531-646		
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FCN)	1-35	484-518	528-630					
PVP4_WTV	DE OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SCN)	1-35	237-274	345-379	484-518	531-646			
PVP5_AHSV4	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WTV)	28-62	565-621						
PVP5_BRD	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACC	7-58	183-229						
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)	45-86	90-226						

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)									
ENTNAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	14-58	92-150	154-222	404-438				
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	14-58	92-150	154-222	404-445				
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	14-58	154-222	404-438					
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	14-58	92-143	148-222	404-438				
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-58	92-143	148-222	404-438				
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	14-58	92-222	404-438					
PVP5_RDV	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	24-58	92-126	163-233	291-325	399-433			
PVP5_WTV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS (RDV)	38-86	95-136	550-596					
PVP61_BTV10	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS (WTV)	434-503	547-581	751-798					
PVP61_MRDV	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	163-215							
PVP61_NPVAC	PROBABLE NONSTRUCTURAL 41.0 KD PROTEIN	MAIZE ROUGH DWARF VIRUS (MRDV)	128-202							
PVP62_BTV10	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	29-96	351-386						
PVP64_NPVOP	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	47-88	159-207	214-251					
PVP67_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	296-361	431-479						
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	44-78	289-364	443-477					
PVP6_BTV11	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GNS	206-281							
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	159-211							
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	159-211							
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	68-103	159-211						
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	12-78	163-211						
PVP6_RDV	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	44-78	135-187						
PVP6_WTV	STRUCTURAL PROTEIN P6	RICE DWARF VIRUS (RDV)	150-191	296-344	360-401					
PVP6_WTVNI	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (WTV)	144-178	286-334	400-434					
PVP74_NPVAC	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NI) (WTV)	144-178	286-334						
PVP74_NPVCF	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	387-456							
PVP75_HSVSA	P74 PROTEIN	CHORISTONEURA FUMIFERANA NUCLEAR POLYHEDROSIS VIRU	385-453							
PVP79_NPVAC	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	50-99	163-211	931-984					
PVP7_BTV10	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	44-78	363-397	406-440					
PVP7_BTV11	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA). (SEROTYPE	184-228							
PVP7_BTV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	201-235							
PVP7_BTV1A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	184-228							
PVP7_BTV1S	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	184-215							
PVP7_BTV2A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	184-228							
PVP7_EHDV1	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	184-228							
PVP7_RDV	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV	86-50	136-178						
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	RICE DWARF VIRUS (RDV)	47-95	172-253						
PVP80_NPVAC	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS (WTV)	47-84	195-243	458-495					
PVP87_NPVOP	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	7-51	99-142	156-204	221-298				
PVP8_BTV10	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	80-162	410-451						
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	54-102	185-219						
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	54-102	185-219						
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	54-102	185-219						
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	54-102	185-219						
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	54-102	185-219						
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	54-102	185-219						
PVP8_FOWPV	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	54-102	185-219						
PVP9_RDV	STRUCTURAL PROTEIN VP8 PRECURSOR	FOWLPOX VIRUS	193-245							
PVP9_WTV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS (RDV)	13-47	186-226						
PVP9_WTVNI	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (WTV)	140-212							
PVPG_BYDV1	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NI) (WTV)	140-212							
PVPHE_NPVAC	PUTATIVE GENOME-LINKED PROTEIN PRECURSOR	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1) (BYDV)	25-59							
PVPHE_NPVOP	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	146-223							

PCGENE	ALLSHOTS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVPR_SIVGL	33 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	131-201	206-265						
PVPR_SIVMC	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	78-115							
PVPU_HIVIA2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE	1-28							
PVPU_HIVIB1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HI	4-72							
PVPU_HIVIB8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE) (HIV	5-72							
PVPU_HIVIBN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE) (I	4-59							
PVPU_HIVIBR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HI	4-72							
PVPU_HIVIC4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-40							
PVPU_HIVIEL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (HIV	6-40							
PVPU_HIVII2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HI	5-72							
PVPU_HIVIJ3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE) (HIV	2-50							
PVPU_HIVIR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IRCSF ISOLATE) (I	4-59							
PVPU_HIVIMA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (HI	5-50							
PVPU_HIVIND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HI	4-40							
PVPU_HIVIPV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HI	4-72							
PVPU_HIVIRH	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE) (	1-39							
PVPU_HIVIS1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE) (HI	4-59							
PVPU_HIVZ2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLA	6-40							
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	21-78							
PVPX_HIV2D2	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7) (I	42-83							
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-74	857-898						
PVS03_ROTSI	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	248-287							
PVS06_ROTDS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-44							
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT	69-144							
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	24-58	64-103						
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	9-43							
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-43							
PVS07_ROTBJ	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN KN-4)	2-36	282-320						
PVS07_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	88-153	199-236						
PVS07_ROTPS	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	88-162	202-236						
PVS07_ROTSI	NONSTRUCTURAL PROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	88-153	199-236						
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	2-70	75-119	160-226					
PVS08_ROTSI	NONSTRUCTURAL PROTEIN NS2/VP9	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	2-46	144-212	217-255					
PVS09_ROTB4	NONSTRUCTURAL PROTEIN NCVP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	2-54	282-320						
PVS09_ROTBS	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A5)	2-43	282-320						
PVS09_ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	2-54	282-320						
PVS09_ROTBA	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	2-54	282-320						
PVS09_ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B223)	2-54	282-320						
PVS09_ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KK3)	2-54	282-320						
PVS09_ROTBN	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN NCDV)	2-54	282-320						
PVS09_ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	2-43	282-320						
PVS09_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	2-54	282-320						
PVS09_ROTC7	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	285-326							
PVS09_ROTEL	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	282-320							
PVS09_ROTGA	GLYCOPROTEIN VP7	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT	43-77							
PVS09_ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	45-79							
PVS09_ROTH4	GLYCOPROTEIN VP7 PRECURSOR	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-43	282-320						
PVS09_ROTH9	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN AK9)	282-320							
PVS09_ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN HUS)	282-320							
PVS09_ROTHB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN D37)	2-43	282-320						
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	282-320							
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	282-320							
PVS09_ROTHL	GLYCOPROTEIN VP7									

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVS09_ROTID1	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	1-35	282-320						
PVS09_ROTIID	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	2-43	282-320						
PVS09_ROTIIP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	2-43	282-320						
PVS09_ROTIIR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	282-320							
PVS09_ROTIIS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	282-320							
PVS09_ROTIIT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	282-320							
PVS09_ROTIIV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	18-56	208-242	282-320					
PVS09_ROTIIW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	18-56	208-242	282-320					
PVS09_ROTP2	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-43	282-320						
PVS09_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT/76)	282-320							
PVS09_ROTP4	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	282-320							
PVS09_ROTP5	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN OSU)	2-56	208-242	282-320					
PVS09_ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	282-320							
PVS09_ROTP8	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	282-320							
PVS09_ROTPK	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN DEN-144)	18-56	208-242	282-320					
PVS09_ROTPN1	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN K)	18-56	282-320						
PVS09_ROTPY	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BMI-1)	18-56	208-242	282-320					
PVS09_ROTRH	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN YM)	1-35	282-320						
PVS09_ROTSI	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	282-320							
PVS10_ROTBN	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	282-320							
PVS10_ROTBS	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN NCDV)	73-161							
PVS10_ROTBU	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	17-58							
PVS10_ROTH2	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN UK)	73-161							
PVS10_ROTH7	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A28)	73-162							
PVS10_ROTH8	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	73-162							
PVS10_ROTHC	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6)	73-162							
PVS10_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	121-158							
PVS10_ROTS1	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	73-136							
PVS11_ROTGA	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	73-162							
PVS11_ROTGI	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROT.A	24-65	96-130						
PVS11_ROTH5	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP D / STRAIN IDIR)	9-68							
PVS11_ROTH6	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	100-145							
PVS11_ROTHB	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	107-144							
PVS11_ROTHD	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 6 / STRAIN B37)	107-144							
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	111-145							
PVS11_ROTS1	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145							
PVS48_TBRVC	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-145							
PVS11_MUMP1	SATELLITE RNA 48 KD PROTEIN	TOMATO BLACK RING VIRUS (STRAIN C) (TBRV)	217-265							
PVS11_MUMP2	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN SBL-1), AND MUMPS VIRUS (STRAIN SBL	9-46							
PVS11_MUMP4	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 2), AND (STRAIN EDINGB	13-47							
PVS11_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 4)	13-47							
PVS11_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	13-51							
PVS11_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN DELFAST)	13-52							
PVS11_MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	9-46							
PVSH_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	9-46							
PVS11_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	9-51							
PVS11_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	13-55							
PVSH_MUMPT	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	17-51							
PVS11_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN TAKAHASHI)	13-47							
PVS11_REOVD	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	13-47							
PVS11_REOVI	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	8-122	122-175	222-259					
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DS/JONES)	1-178							

PGENE	ALLNOTES	AN Viruses (see bacteriophages)	AREA1	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA3
FILEFAME	PROTEIN	VIRUS	1-107	112-198						
PVSI1_REOVD	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	1-107	112-198						
PVSI2_REOVL	SIGMA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	150-384							
PVSI3_REOVD	SIGMA 3 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	150-384							
PVSI5_REOVJ	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	85-119							
PVSI52_IIEVDU	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 2 / STRAIN DJ/JONES)	1-45							
PVSI12_IIEVAE	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN BURMA) (HEV)	118-352							
PVSI12_IIEVAIV	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO) (HEV)	317-551							
PVSI12_IIEVPA	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR) (HEV)	118-352							
PVSI12_IIEVUH	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	318-553							
PVSI2A_CAPVI	STRUCTURAL PROTEIN 2	HEPATITIS E VIRUS (ISOLATE RHESUS)(HEV)	186-220							
PVP4_CAPVI	PROTEIN 72A	CAPRIPOXVIRUS (STRAIN INS-1)	120-138							
PVI4_CAPVK	74 PROTEIN	CAPRIPOXVIRUS (STRAIN INS-1)	86-120							
PVIER_EBV	74 PROTEIN	CAPRIPOXVIRUS (STRAIN KS-1)	86-120							
PVIER_HCHVA	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	335-390	393-439						
PVIER_HCHVB	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	412-451	617-658						
PVIER_HSVAU	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN UGANDA-1102)	468-502							
PVIER_HSVED	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	11-45							
PVIER_HSVSA	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	99-136	698-744						
PVIER_VZVD	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	226-260							
PVV_PIIIA	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	588-622							
PVVI_SENDS	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN YOSHIDA) (PIV-4A)	6-38							
PY101_SSV1	Y1 PROTEIN	SENDAI VIRUS (STRAIN 6P0)	104-138							
PY101_SSV1	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	18-80							
PY110_SSV1	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-45							
PY110_SSV1	HYPOTHETICAL 11.0 KD PROTEIN	SULFOLORUS VIRUS-LIKE PARTICLE SSV1	55-89							
PY11K_TYDVA	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	10-94							
PY12K_FCVC6	HYPOTHETICAL 12.2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	93-87							
PY12K_FCV79	HYPOTHETICAL 12.2 KD PROTEIN IN COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI68 FIVI) (FCV)	4-38							
PY12K_FCVF9	HYPOTHETICAL 12.1 KD PROTEIN IN COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	4-38							
PY12K_RHDV	HYPOTHETICAL 12.7 KD PROTEIN IN COAT PROTEI	RABBIT HEMORRHAGIC DISEASE VIRUS (RHDV)	13-50							
PY12K_CLVK	HYPOTHETICAL 12.7 KD PROTEIN IN COAT PROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351) (RHDV)	13-50							
PY12K_CLVN	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 144)	40-77							
PY12K_NYVOP	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	41-77							
PY13K_SSV1	HYPOTHETICAL 14.1 KD PROTEIN IN 10 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	16-67							
PY14K_SSV1	HYPOTHETICAL 13.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	2-36	62-96						
PY14K_ADE02	HYPOTHETICAL 13.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	5-39							
PY14K_SSV1	HYPOTHETICAL PROTEIN C-160	HUMAN ADENOVIRUS TYPE 2	119-186							
PY17K_SSV1	HYPOTHETICAL 17.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-35	77-111						
PY17K_SSV1	HYPOTHETICAL 17.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-45	119-153						
PY20K_SSV1	HYPOTHETICAL 18.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	102-136							
PY22K_SSV1	HYPOTHETICAL 20.4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-107							
PY23_SOCAV	HYPOTHETICAL 21.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	133-180							
PY23K_SSV1	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	117-154							
PY23K_SSV1	HYPOTHETICAL 21.3 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	7-97	100-141						
PY23K_NPVAC	HYPOTHETICAL 21.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	230-278							
PY3_SOCAV	HYPOTHETICAL 33.7 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	133-241							
PY3K9_SSV1	HYPOTHETICAL PROTEIN 3	SOYBEAN CHLOROTIC MOTTLE VIRUS	115-149							
PY7_SOCAV	HYPOTHETICAL 5.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-31							
PY8K_SSV1	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	56-94							
PY8_SOCAV	HYPOTHETICAL 8.3 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-115	501-537	546-581	658-700				
PY8K9_SSV1	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	46-81							
PYBOU_FOWPN	HYPOTHETICAL BAA01-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	74-113	184-221						

GENE NAME	ALL VIROTIS PROTEIN	All Viruses (no bacteriophage) VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
			29-70						
PYD01_FOWPX	HYPOTHETICAL BAMHI-ORF4 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	1-33	61-95					
PYD06_FOWPX	HYPOTHETICAL BAMHI-ORF3 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	1-33						
PYD01_FOWPX	HYPOTHETICAL BAMHI-ORF6 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	113-149						
PYD10_FOWPX	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	144-338						
PYD12_FOWPX	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	162-233						
PYD13_FOWPX	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	4-47	117-155					
PYD13_FOWPX	HYPOTHETICAL BAMHI-ORF13 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	122-163						
PYBLF_EBV	HYPOTHETICAL BDLF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	458-506						
PYH10_HSV57	HYPOTHETICAL 24 KD PROTEIN IN DIFF J REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	143-188						
PYH10_FOWPI	HYPOTHETICAL 30 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	160-204						
PYGA1_HSV6A	HYPOTHETICAL 23 KD PROTEIN IN GLYCOPROTEI	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1) (MDHV)	176-211						
PYGA1_HSV6A	HYPOTHETICAL 23 KD PROTEIN IN GLYCOPROTEI	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5) (MDHV)	176-211						
PYBL1_VACCV	HYPOTHETICAL 21.7 KD HINDIII-C PROTEIN	VACCINIA VIRUS (STRAIN WR)	24-78	95-139					
PYKR4_EBV	HYPOTHETICAL HOST RANGE 37.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	24-58	181-222					
PYE15_ADE41	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	16-58						
PYL1B2_EBV	HYPOTHETICAL 12.4 KD PROTEIN IN 33 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	19-41						
PYL1B2_EBV	HYPOTHETICAL BLRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	64-125						
PYOR2_COYAV	HYPOTHETICAL 33 KD PROTEIN	CORDELINA YELLOW MOTTLE VIRUS (COYAV)	94-147						
PYOR2_LELV	HYPOTHETICAL 33 KD PROTEIN	CORDELINA YELLOW MOTTLE VIRUS (COYAV)	33-77						
PYORJ_TTV1	HYPOTHETICAL 28.4 KD PROTEIN	LEL YSTAD VIRUS (LV)	100-134						
PYOR1_ADE41	HYPOTHETICAL 69 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	16-54						
PYORA_TTV1	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIR)	70-127						
PYORD_TTV1	HYPOTHETICAL 9.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	31-67						
PYORE_TTV1	HYPOTHETICAL 15.4 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	6-51	86-130					
PYORL_TTV1	HYPOTHETICAL 15.5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	78-122						
PYORQ_TTV1	HYPOTHETICAL 36.8 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	1-43						
PYORF_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	1-43						
PYORW_TTV1	HYPOTHETICAL 38.7 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	4-38	281-315					
PYP12_RIBV	HYPOTHETICAL 12.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	4-89						
PYP12_RTBVP	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	33-72						
PYP24_RTBV	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTC	33-72						
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	31-101	106-157					
PYP4B_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RT	31-101	106-157					
PYP4B_RTBVP	HYPOTHETICAL P48 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	49-111	197-231					
PYP48_NPVAC	HYPOTHETICAL P48 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RT	49-111	197-231					
PYP7A_TMVA	HYPOTHETICAL PROTEIN IN P6.5 S'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	32-73						
PYP0I_NPVAC	HYPOTHETICAL P7A PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	1-45						
PYP0L_IPNVI	HYPOTHETICAL 23.6 KD PROTEIN IN POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (	116-153						
PYP01_AJIEPV	HYPOTHETICAL 17.1 KD PROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	23-66						
PYP01_AJIEPV	HYPOTHETICAL 7.6 KD PROTEIN IN TK S'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	9-61						
PYPJ1_HSV6G	HYPOTHETICAL PROTEIN IN TK S'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	1-37	62-96	149-183				
PYPJ1_HSV6G	HYPOTHETICAL PROTEIN BJ2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	193-264						
PYPJ4_HSV6G	HYPOTHETICAL PROTEIN BJ3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	134-175						
PYPJ5_IRV6	HYPOTHETICAL PROTEIN BJ4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	232-266	404-442					
PYKR1_EBV	REPETITIVE PROTEIN ORF2	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYI	1-45						
PYSA1_EBV	HYPOTHETICAL BRLF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	96-130						
PYTA1_EBV	HYPOTHETICAL BSLF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	98-177						
PYUB2_NPVOP	HYPOTHETICAL BTLF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	390-424						
PYVAC_VACCC	HYPOTHETICAL 240 KD PROTEIN IN UBIQUITIN TR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	33-69	178-204					
PYVAG_VACCC	HYPOTHETICAL 14.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-43						
PYVAH_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-37						
PYVAN_VACCC	HYPOTHETICAL 14.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	78-112						

PGENE	ALLNOTES	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
[illegible]	PROTEIN	VIRUS	23-57							
PYVBH_VACCC	HYPOTHETICAL 7.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-39							
PYVCC_VACCC	HYPOTHETICAL 7.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-48							
PYVDB_VACCC	HYPOTHETICAL 9.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-80							
PYVDB_VACCV	HYPOTHETICAL 8.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	46-80							
PYVDC_VACCV	HYPOTHETICAL 8.1 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	7-41							
PYVGB_VACCC	HYPOTHETICAL 7.1 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	10-51							
PYVIA_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	9-53							
	HYPOTHETICAL 9.1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)								

TABLE VI

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

PCGENE	[1]2a1]3a:4	All Viruses [no bacteriophage]										
DILENAME	PROTEIN	VIRUS	AREA1	AREA2	pREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
P19K_TRVSV	POTENTIAL RD PRO	TOBACCO RATTLE VIRUS (STRAIN SYN1)	107-414	108?-111?	1142-1169							
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133									
PAANT_HDVDJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133									
PAANT_HDVIT	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133									
PAANT_HDVMJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133									
PAANT_HDVSI	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	104-131	106-133								
PAANT_HDVSJ	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	104-131	106-133								
PAANT_HDVWO	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133									
PATIH_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438MUNICH1)	72-106									
PATII_VACCV	94 KD A-TYPE INCLUSION PRO	VACCINIA VIRUS (STRAIN WR)	14-56	67-94	424-472	570-633						
PATII_VARV	81 KD A-TYPE INCLUSION PRO	VARIOLA VIRUS	63-94	425-504	531-601							
PATID_HSV11	ALPHA TRANS-IND FACTOR 78 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	300-335									
PATID_HSV1F	ALPHA TRANS-IND FACTOR 77 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	301-335									
PATID_HSVEB	ALPHA TRANS-IND FACTOR 81 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	294-331									
PATIN_HSVEB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	255-289									
PATI_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-56	67-94	426-498	532-620	837-861	911-990	1234-1261			
PATI_EBV	A-TYPE INCLUSION PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	191-320									
PBLF_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	84-111	113-144								
PCAIH_VACCC	CELL SURFACE BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	84-111	113-144								
PCAIH_VACCV	CELL SURFACE BINDING PROTEIN	VACCINIA VIRUS (STRAIN WR)	84-111	113-144								
PCAIH_VARV	CELL SURFACE BINDING PROTEIN	VARIOLA VIRUS	84-111	113-144								
PCGHJ_HSV1A	CYCLIN HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and Ky A)	312-339									
PCOAI_POVMA	COAT PROTEIN VP1	HERPES VIRUS SAIMIRI (STRAIN 11)	123-134									
PCOAJ_BFDV	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	139-186									
PCOAJ_POVBO	COAT PROTEIN VP1	BUDGERIGAR FLEDGLING DISEASE VIRUS	160-197									
PCOAJ_POVJC	COAT PROTEIN VP1	BOVINE POLYOMAVIRUS	49-76									
PCOAJ_POVLY	COAT PROTEIN VP1	POLYOMAVIRUS JC	37-64									
PCOAJ_POVSE	COAT PROTEIN VP1	LYMPHOTROPIC POLYOMA VIRUS	176-204									
PCOAJ_POVSX	COAT PROTEIN VP1	MOUSE POLYOMAVIRUS (STRAIN KILLIAN)	22-49									
PCOAJ_SV40	COAT PROTEIN VP1	SIMIAN VIRUS 40	138-205									
PCOAJ_AAV2	PROBABLE COAT PROTEIN 3	ADENO-ASSOCIATED VIRUS 2	126-147									
PCOAJ_TTV1	COAT PROTEIN TP3	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-30									
PCOAT_ADVG	COAT PROTEIN VP1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	194-221									
PCOAT_BLRV	COAT PROTEIN	BEAN LEAFROLL VIRUS	96-123									
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	63-90	193-220	461-488							
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DM)	64-91	194-221								
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	63-90	193-220								
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	63-90	193-219	461-488							
PCOAT_CAMVS	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	64-91	194-221								
PCOAT_CARMV	COAT PROTEIN	CARNATION MOTTLE VIRUS	16-43									
PCOAT_CHYP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	41-86									
PCOAT_CMV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	320-362									
PCOAT_CSMV	COAT PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	62-89									
PCOAT_CYMV	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	176-200									
PCOAT_FCVCA	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 F1V)	566-600									
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4)	316-343	566-600								
PCOAT_FCVF9	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	319-346	569-603								
PCOAT_JMVD	PROBABLE COAT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	220-247	358-385								
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	232-700	246-273								
PCOAT_MSV	COAT PROTEIN	MISCANTHUS STREAK VIRUS	139-166									
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	106-133									
PCOAT_PAVHB	PROBABLE COAT PROTEIN VP1	HUMAN PARVOVIRUS B19	324-351	569-596								
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS (ISOLATE ATCC PV233)	46-73									
PCOAT_SOCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-162									
PCOAT_TAMV	GENOME POLYPROTEIN	TAMAPOLLO MOSAIC VIRUS	21-48									
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMY VIRUS	23-50									
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN DS-3)	3-30	41-68								
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	93-120									

PCGENE	107:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	232-259								
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	104-131								
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	104-131								
PCOAT_TMVCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COWPEA)	78-132								
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAIILEMENSE)	104-131								
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	104-131								
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O and KOKUBU)	104-131								
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	104-131								
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO L.)	104-131								
PCOAT_TNVA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	90-117								
PCOAT_TRVPS	COAT PROTEIN	TOBACCO RATTLE VIRUS (STRAINS PSG and PLB).	118-145								
PCOAT_TYDVA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	10-37								
PCOAT_TYMV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-68								
PCOAT_TYMVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	41-68								
PDNBJ_ADE07	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 7	46-73								
PDNBJ_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	977-1004	1041-1068							
PDNBJ_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	437-464								
PDNBJ_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	333-368	512-539							
PDNBJ_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	584-618								
PDNBJ_POVJC	DNA-BINDING PROTEIN	POLYOMAVIRUS JC	2-29								
PDNBJ_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	435-462	532-559							
PDNLJ_VACCC	DNA LIGASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-131	172-199	358-385						
PDNLJ_VACCV	DNA LIGASE	VACCINIA VIRUS (STRAIN WR)	104-131	172-199	358-385						
PDNLJ_VARV	DNA LIGASE	VARIOLA VIRUS	104-131	172-199	358-385						
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	403-431								
PDPOL_CBEPV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	23-64	202-240							
PDPOL_CHVN2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	338-365								
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	338-365								
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	17-51	370-416	621-655	722-799					
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	753-780								
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S3)	5-39								
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39								
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	5-39	304-331							
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	271-325								
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39								
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PIDW294)	436-483								
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	443-470								
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	328-366	710-737							
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	625-652								
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	598-643								
PDPOL_NPVLD	DNA POLYMERASE	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	357-384								
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	770-797								
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	770-797								
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	769-796								
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326								
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	212-242	290-331							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-241	289-330							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-242	290-331							
PDTXH_CORBE	DIPHTH TOXIN HOMOLOG CRM228 PREC	CORYNEPHAGE BETA	516-533								
PDTX_CORBE	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE BETA	523-560								
PDTX_COROM	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE OMEGA	516-533								
PDUT_HSVE4	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90-117								
PDUT_HSVSA	DEOXYU 5'-TRIPHOSPH NUCHYDROLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	179-213								
PE1BL_ADE07	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 7	126-153								
PE1BL_ADE40	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	136-163								
PE1BS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	3-30								

PCGENE	10Jul96.d	All Viruses (no bacteriophage)								
E1B_ADE41	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	122-173							
E1B_ADE41	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 2	3-29							
E1B1A_ADE01	EARLY E1B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	21-48							
E1B1A_ADE01	EARLY E1B 15.5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	5-33	70-100						
E1B1A_ADE01	EARLY E1B 20.1 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 2	70-107							
E1B1B_ADE31	EARLY E1B 20.1 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 31	125-161							
E1B1B_ADE31	EARLY E1B 20.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 31	18-46							
E1B2_ADE41	EARLY E1B 17.7 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	55-82							
E1BA_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	103-341	470-491						
E1F1_VARV	EARLY TRANSFACTOR 70 KD SUBUNIT	VARIOLA VIRUS	420-468							
E1N1_AVBLE	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	6-33	426-474						
E1N1_AVSN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	193-457							
E1N1_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	17-44	544-601	631-695					
E1N1_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	17-44	533-632	660-724					
E1N1_BIV27	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	17-44	533-632	660-724					
E1N1_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	104-337							
E1N1_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	104-337							
E1N1_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE YDN)	104-337							
E1N1_BLVB1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	111-337							
E1N1_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB359)	104-337							
E1N1_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	104-337							
E1N1_CAEVC	ENV POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	103-192							
E1N1_EIAV1	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 14-1)	668-712							
E1N1_EIAV2	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 14-2)	668-695							
E1N1_EIAV3	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 14-3)	668-712							
E1N1_EIAV5	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE PJ 14-5)	668-696							
E1N1_EIAV9	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	668-712							
E1N1_EIAVC	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL12)	668-712							
E1N1_EIAVW	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSU5)	668-712							
E1N1_EIAVY	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	668-712							
E1N1_FENV1	ENV POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	33-60	517-544						
E1N1_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	630-680	723-769						
E1N1_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	638-668	720-747						
E1N1_FIVTZ	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640-679	721-748						
E1N1_FLVCG	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	509-538							
E1N1_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	490-519							
E1N1_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAABIDA-81)	510-539							
E1N1_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SAUMA)	487-516							
E1N1_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	11-41	318-355	866-893					
E1N1_FSVGA	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	510-539							
E1N1_FSVGB	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GA)	490-519							
E1N1_FSVSM	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN SM)	493-522							
E1N1_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-203	533-564						
E1N1_HTLIA	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	342-376							
E1N1_HTLIC	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	342-376							
E1N1_HTLIM	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	342-376							
E1N1_HTLV2	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	336-370							
E1N1_HV1A2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	544-592	610-682	790-823					
E1N1_HV1B1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	545-594	611-683	791-818					
E1N1_HV1B1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	540-589	606-678	786-813					
E1N1_HV1BN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	367-394	338-365	562-590	628-679	787-813			
E1N1_HV1BR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	536-589	616-688	796-823					
E1N1_HV1C4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	537-424	537-606	641-693	803-833				
E1N1_HV1EL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	355-396	388-417	542-591	628-680				
E1N1_HV1HG	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE)	545-594	611-683	791-818					
E1N1_HV1HO	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	545-594	611-683	791-818					
E1N1_HV1JR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRI ISOLATE)	536-577	598-605	642-694	802-829				
E1N1_HV1R	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	536-583	622-635	781-811					

PCGENE	107x170x4	All Viruses (no bacteriophages)	AREA1	AREA3	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS									
PENV_HVI1B	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN RH-1-GP31)	274-301	555-596	617-617	776-824					
PENV_HVI1MA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	347-393	615-707	794-826						
PENV_HVI1NF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NIFA ISOLATE)	343-392	629-681	789-816						
PENV_HVI1AN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ANT ISOLATE)	343-370	567-593	633-664	791-819					
PENV_HVI1NS	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	338-360								
PENV_HVI1ND	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	536-583	621-633	783-813					
PENV_HVI1OY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	344-383	610-704	789-820						
PENV_HVI1V	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HV1J ISOLATE)	345-394	611-683	791-818						
PENV_HVI1BH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU/LAI ISOLATE)	280-307	331-378	514-603	640-693	806-833				
PENV_HVI1S1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	333-363	536-585	622-674	782-809					
PENV_HVI1S3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	341-389	627-679	781-815						
PENV_HVI1SC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	338-365	545-593	631-663						
PENV_HVI1W1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	338-365	545-593	631-663	791-818					
PENV_HVI1W2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	338-361	536-584	622-674	782-809					
PENV_HVI1Z1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (EZ1/CDC-Z1/1 ISOLATE)	285-296	542-591	628-660	790-820					
PENV_HVI1Z3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE_3 ISOLATE)	331-392								
PENV_HVI1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE_6 ISOLATE)	336-397	545-593	636-682	792-822					
PENV_HVI1Z4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2-4 ISOLATE)	266-307	531-601	614-636	797-828					
PENV_HVI1ZH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 1121/77 ISOLATE)	345-394	637-686	791-823						
PENV_HVI1BE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE BRU)	61-88	333-391	621-648	613-697					
PENV_HVI1CA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE CAM1)	334-393	633-690	635-669						
PENV_HVI1D1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE D194)	61-88	333-390	535-582	644-688					
PENV_HVI1G1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE GHANA-1)	60-87	324-381	536-581	611-640	645-693				
PENV_HVI1N2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE NIH-Z)	61-88	326-351	536-581	611-640	662-689				
PENV_HVI1R0	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE ROD)	58-85	331-392	627-658						
PENV_HVI1S1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE SF1/24 IFCP)	402-426	527-554	559-586	638-682					
PENV_HVI1S5	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE SF5/IFCP)	557-584	614-653							
PENV_HVI1S7	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE SF7)	402-426	527-554	559-586	648-692					
PENV_MCF1	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	471-511								
PENV_MCF13	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI-13)	488-513								
PENV_MLVAV	ENV POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	317-344								
PENV_MLVCB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	310-339								
PENV_MLVF3	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 3)	522-553								
PENV_MLVF7	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	522-553								
PENV_MLVF9	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FVC-51)	522-553								
PENV_MLVHO	ENV POLYPROTEIN	HOMOLOY MURINE LEUKEMIA VIRUS	516-540								
PENV_MLVKI	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-81								
PENV_MLVM40	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	502-543								
PENV_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538								
PENV_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-538								
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	458-485	562-589							
PENV_MMTVO	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	458-485	562-589							
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	432-470								
PENV_MSVFB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	37-84								
PENV_OMVV3	ENV POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	42-89	196-233	780-807						
PENV_RMCFV	ENV POLYPROTEIN	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	417-517								
PENV_SFV1	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	10-41	866-901							
PENV_SFVL	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK3)	10-45	319-357	673-700	863-898					
PENV_SIVA1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	280-310	561-588	593-619	653-679	697-724				
PENV_SIVAG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	279-301	566-593	597-624	658-685	703-730				
PENV_SIVAJ	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	257-291	336-372	568-601	634-708					
PENV_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	1-30	268-298	590-617	651-678					
PENV_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	160-187	331-359	536-564	626-654					
PENV_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	0-33	138-185	589-650	784-816					
PENV_SIVM1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	120-150	530-609	671-715						
PENV_SIVMG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MND1) ISOLATE)	154-215	277-289							
PENV_SIVMK	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MAC ISOLATE)	553-604								

PCGENE	10:17:14	All Viruses (no bacteriophage)	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1
	PROTEIN	VIRUS	149-408	411-612	642-669	691-718					
PENV_SIVPA	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	281-308	553-612	642-669	691-718					
PENV_SIVSL	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJA/BC1) ISOLATE)	286-313	554-595	646-723						
PENV_SIVSP	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJB/BC1) ISOLATE)	400-463								
PENV_SMRVH	ENV POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	409-471								
PENV_SRVI	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	21-82	333-800							
PENV_VILV	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	21-82	780-807							
PENV_VILV1	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	21-82	782-809							
PENV_VILV2	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K52)	190-226								
PETF1_FOWPI	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	FOWLPOX VIRUS (STRAIN FP-1)	206-240	468-496	550-583						
PETF1_SFVKA	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	307-341	478-497							
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	307-341	478-497							
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	64-97	174-210	902-933						
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 82	VACCINIA VIRUS (STRAIN COPENHAGEN)	64-97	174-210	902-933						
PETF1_VAVV	EARLY TRANSCRIPTION FACTOR 82	VARIOLA VIRUS	106-139								
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	179-217								
PFIB1_ADE40	41 K KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	178-218								
PFIB1_ADE41	41 K KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	208-235								
PFIBF_ADE02	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 2	324-351	444-473							
PFIBF_ADE40	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	339-366	461-488							
PFIBF_ADE41	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	118-145	184-191							
PFIBF_ADEB3	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3	225-305	225-352							
PFIBF_ADEM1	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	138-169								
PFOSX_MSVFR	V-FOS/FOX TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	116-147								
PFOS_AVFBJ	P35,V-FOS TRANSFORMING PROTEIN	AVIAN RETROVIRUS NK24	162-193								
PFOS_MSVFB	P35,V-FOS TRANSFORMING PROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	270-297								
PGAG_AVIEN	GAG POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	144-171								
PGAG_EIAVY	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	621-648								
PGAG_FOAMV	GAG POLYPROTEIN	HUMAN SPUMARETROVIRUS	396-443	447-474							
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	91-118								
PGAG_HV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	91-118								
PGAG_HV1J3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	91-118								
PGAG_HV1MN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	87-114								
PGAG_HV1BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	88-115								
PGAG_HV2BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115								
PGAG_HV2D1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	88-115								
PGAG_HV2NZ	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	88-115								
PGAG_HV2ST	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	276-307								
PGAG_IPHA	RETROVIRUS-RELATED GAG POLYPROTEI	HAMSTER INTRACISTERNAL A-PARTICLE	133-60	64-103	1232-1259						
PGAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEI	MOUSE INTRACISTERNAL A-PARTICLE	96-130								
PGAG_IPMAE	RETROVIRUS-RELATED GAG POLYPROTEI	MOUSE INTRACISTERNAL A-PARTICLE	84-111	116-187							
PGAG_MATVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN DBA)	84-116								
PGAG_MATVC	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	84-111	136-187							
PGAG_MATVG	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	222-260								
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	497-531	624-651							
PGAG_SCYLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A	473-507								
PGAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	88-115								
PGAG_SIVMK	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	88-115								
PGAG_SIVMS	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)	88-115								
PGAG_SIVS4	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJSM/16 ISOLATE)	88-115								
PGAG_SIVSP	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC1) ISOLATE)	88-115								
PGAG_SMSAV	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS	397-441								
PGAG_SRVI	GAG POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	223-281								
PHELI_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	184-211	331-360							
PHELI_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	418-449								
PHELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	490-517	701-728							
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	208-243								
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	208-243								
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	208-243								

PGCGME	Identified	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PIEMA_CVBO	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	290-343								
PIEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC43)	290-343								
PIEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	187-451								
PIEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	31-31	111-437							
PIEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOK/AIDO/1/77)	181-451								
PIEMA_IACAO	HEMAGGLUTININ	INFLUENZA A VIRUS (STRAIN A/CANVASBACK/GOLA/82)	9-36								
PIEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/75)	181-451								
PIEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	31-36	182-441	494-538						
PIEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	396-426								
PIEMA_IACKQ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83(H5N2))	396-426								
PIEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	119-149	186-443							
PIEMA_IADA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	181-451								
PIEMA_IADA3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	423-453	499-543							
PIEMA_IADA5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	387-453								
PIEMA_IADA6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALDERLEY/1/76)	39-36	418-478							
PIEMA_IADCZ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	181-451								
PIEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	21-55	402-453	508-533						
PIEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/1/77)	371-437								
PIEMA_IADH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/80)	371-437								
PIEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/13/80)	371-437								
PIEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/82)	371-437								
PIEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/21/82)	371-437								
PIEMA_IADH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/85)	371-437								
PIEMA_IADH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	371-437								
PIEMA_IADH8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/11/85)	415-445								
PIEMA_IADM3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/76)	21-36								
PIEMA_IADM4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/59/71)	387-453								
PIEMA_IADM6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MINNESOTA/1/53)	21-38								
PIEMA_IADN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/1/78)	21-55								
PIEMA_IADN2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/2/76)	381-451								
PIEMA_IADU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	21-55								
PIEMA_IADU3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	387-453								
PIEMA_IAEN4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/939/69)	24-51								
PIEMA_IAEN7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/2/77)	40-67	317-453							
PIEMA_IAFPL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	177-221	384-442							
PIEMA_IAGRE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	181-451								
PIEMA_IAGU2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	305-353								
PIEMA_IAGUA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/33/84)	304-351								
PIEMA_IAHAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	186-453								
PIEMA_IAHAR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/HARBIN/1/81)	29-36								
PIEMA_IAHC6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CANBRIDGE/1/63)	28-36	194-221	388-457						
PIEMA_IAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CANBRIDGE/1/73)	29-36	194-221	388-457						
PIEMA_IAHD1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	29-36	194-221	388-457						
PIEMA_IAHDE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	29-36	194-221	388-457						
PIEMA_IAHF0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	186-453								
PIEMA_IAHK6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	186-453								
PIEMA_IAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	186-453								
PIEMA_IAHLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	28-36	194-221	388-457						
PIEMA_IAHLO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/1/73)	29-36	194-221	388-457						
PIEMA_IAHM3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	186-453								
PIEMA_IAHN4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	186-453								
PIEMA_IAHNN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	29-36	194-221	388-457						
PIEMA_IAHPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	28-36	194-221	388-457						
PIEMA_IAHRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/3/65)	186-453								
PIEMA_IAHSA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAN ANTIAGO/1/65)	186-453								
PIEMA_IAHSP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	29-36	194-221	388-457						
PIEMA_IAHSW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/13/72)	28-36	194-221	388-457						

FEGENE	10:21:17:04	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PIEMA_IAHTE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	386-453								
PIEMA_IAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/71)	386-453								
PIEMA_IAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	386-453								
PIEMA_IAIAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/305/57)	196-223								
PIEMA_IAKLE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	39-56	423-478							
PIEMA_IALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/57)	39-56	423-478							
PIEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	386-450								
PIEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	388-455								
PIEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	387-453								
PIEMA_IAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	40-67	387-453							
PIEMA_IAME2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	40-67	387-453							
PIEMA_IAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	24-51	371-437							
PIEMA_IAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	11-38	382-441							
PIEMA_IAMT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MT/60/68)	387-453								
PIEMA_IAPR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PR/8/34)	305-534								
PIEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	39-56	435-478							
PIEMA_IAQU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/170)	24-51								
PIEMA_IAUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	381-451								
PIEMA_IASE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	381-451								
PIEMA_IASW3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	28-56	380-387	506-547						
PIEMA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/31/86)	119-146	384-443							
PIEMA_IATAI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAIWAN/1/86)	39-56								
PIEMA_IATR1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ARKANSAS/1/79)	415-445								
PIEMA_IATRM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	381-451								
PIEMA_IATRO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	507-534								
PIEMA_IATRP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/6118/68)	424-454	493-539							
PIEMA_IATRX	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	12-42	194-221	381-422						
PIEMA_IATRX	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1966)	419-449	500-536							
PIEMA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/AUSTRALIA/68/73)	21-55								
PIEMA_IAUD0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	40-67	387-453							
PIEMA_IAUS5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	39-56	433-478							
PIEMA_IAVI1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	41-68	388-454							
PIEMA_IAWI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	424-477								
PIEMA_IAXA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XIANFENG/1/57)	39-56								
PIEMA_IAZC0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	40-67	387-453							
PIEMA_IAZH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	371-437								
PIEMA_IAZH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	371-437								
PIEMA_IAZIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1726/88)	418-478	500-547							
PIEMA_IAZN3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	418-478	500-547							
PIEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UK/ELD/1984)	387-453								
PIEMA_IBBEE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	400-431	439-483							
PIEMA_IBBIO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/4/1)	398-431	439-483							
PIEMA_IBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	398-439	437-481							
PIEMA_IBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	398-438	439-483							
PIEMA_IBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	398-439	438-482							
PIEMA_IBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	398-439	438-482							
PIEMA_IBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/4/90)	398-434	432-476							
PIEMA_IBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	398-439	437-481							
PIEMA_IBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	398-439	437-481							
PIEMA_IBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	398-439	438-482							
PIEMA_IBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	398-434	432-476							
PIEMA_IBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	400-431	439-483							
PIEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	398-434	437-481							
PIEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	401-519								
PIEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	401-519	393-434	432-476						
PIEMA_INCHY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/81)	403-531								
PIEMA_INCJN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	404-532								

PCGENE	10/31/1994	All Viruses (no bacteriophages)								
ID_NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PHEMA_INCKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KYOTO/1/81)	483-559							
PHEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ILLISSIPPI/80)	483-559							
PHEMA_INCNA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/NAARA/82)	483-559							
PHEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	483-559							
PHEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/11/81)	483-559							
PHEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	483-559							
PHEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	483-559							
PHEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YANAGATA/10/81)	483-559							
PHEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	64-91							
PHEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	64-91							
PHEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	64-91							
PHEMA_NDVH	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	64-91							
PHEMA_NDVI	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	64-91							
PHEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	64-91							
PHEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/56)	64-91							
PHEMA_NDVTG	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS GB/48)	64-91							
PHEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	64-91							
PHEMA_PHDDV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	38-66	46-73						
PHEMA_FIHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	79-110	366-393						
PHEMA_FIJB	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93							
PHEMA_FIJH	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61							
PHEMA_FIJHA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN AUS/1215/54/74)	27-61							
PHEMA_FIJHT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TEX/51/80)	27-76							
PHEMA_FIJHU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TEX/9105/82)	27-70							
PHEMA_FIJHV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TEX/1367/81)	27-61							
PHEMA_FIJHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASH/641/79)	27-61							
PHEMA_FIJHX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASH/1311/73)	27-61							
PHEMA_RACVI	HEMAGGLUTININ PRECURSOR	RACCOON POXVIRUS	166-214	336-383						
PHEMA_SENDS	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	79-106							
PHEMA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIMI)	79-106							
PHEMA_SENDH	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	79-106							
PHEMA_SENDI	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	79-106							
PHEMA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	79-106							
PHEMA_SV41	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	21-52	394-421						
PHEMA_VACCC	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	119-146	175-202	216-243					
PHEMA_VACCI	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN IHD-J)	109-146	175-202	216-243					
PHEMA_VACCT	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN TIAN TAN)	119-146	175-202	216-243					
PHEMA_VACCV	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	109-146	175-202	215-242					
PHEMA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	111-148	177-211	214-244					
PHEX9_ADE02	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 2	100-134							
PHEX9_ADE05	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 5	100-134							
PHEX9_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPES 3 and 7	97-137							
PHEX_ADE02	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 2	146-173	359-386	433-460					
PHEX_ADE03	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 3	340-373							
PHEX_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	398-423							
PHEX_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	305-338							
PHUB_COW7X	HEMORRHAGE-INDUCING 38 KD PROTEIN	COWPOX VIRUS	28-55							
PIRO_COW7X	HOST RANGE PROTEIN	COWPOX VIRUS	462-489							
PI1W_ASF87	LATE PROTEIN 11 9KL	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	12-43							
PI126_ASF87	LATE PROTEIN P24A	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	113-147							
PIMP_CAMV4	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	17-44							
PIMP_CAMVD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DM)	17-44							
PIMP_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	383-410							
PIMP_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	6-33							
PIMP_FMVD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	372-407							
PIMP_SCMV	INCLUSION BODY MATRIX PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	3-48	331-358						
PIC11_HCMVA	PROB PROC & TRANSPORT PRO UL56	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-324							

PCGENE	18:17:17:4	All Viruses (no bacteriophages)								
FILE_NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA2	AREA1	AREA1	AREA2	AREA2
PC10_HSV1A	PROBABLE PROT A TRANSPORT PRO	HERPESVIRUS SAIMIRI (STRAIN 11)	38-43	492-522						
PC10_HSV2S	PROB PROT A TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	661-691							
PC13_HSV11	TRANSCRIPTIONAL REGULATOR (EC)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	240-275							
PC14_HSV11	IMMEDIATE EARLY PROTEIN (EA)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	40-67							
PC24_HSV1A	DNA-DEPENDENT DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	48-78							
PC25_HCMVA	HYPOTHETICAL PROTEIN (UL1)	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	32-49							
PC25_HCMVA	HYPOTHETICAL PROTEIN (UL11)	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-103							
PC25_HCMVA	HYPOTHETICAL PROTEIN (UL11)	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	31-62							
PKTE5_FSVGA	TYROSINE KINASE TRANSF PROTEIN (ES	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	106-130							
PKTGA_FSVGA	TYROSINE KINASE TRANSF PROTEIN (GA	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	210-232							
PKTMS_FSVSD	TYROSINE KINASE TRANSF PROTEIN (MS	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	227-262							
PKTPS_FUSAV	TYROSINE KINASE TRANSF PROTEIN (PS	FUJINAMI SARCOMA VIRUS	135-243	249-287						
PKTTH_AMEPV	THYMIDINE KINASE	AMSACTA MOOREI ENTOMOPOXVIRUS	47-84							
PKTTH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1)	41-68							
PKTTH_HSV1A	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	140-316							
PKTTH_ILTVT	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN GARDNER-RASHEED)	334-361							
PKTTH_VACCC	THYMIDINE KINASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-74							
PKU74_HSV11	GENE 74 PROTEIN KINASE	HERPESVIRUS 1	491-518							
PKU81_VACCC	39 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	141-168							
PKU81_VACCV	39 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	141-168							
PKU83_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-174							
PKU83_VACCV	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-174							
PKU91_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-74							
PKU91_VACV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	47-74							
PKU05_AVISU	ROS TYROSINE KINASE TRANSF PROTEIN	AVIAN SARCOMA VIRUS (STRAIN UR2)	111-138							
PKU1K_AVIBU	TYROSINE KINASE TRANSF PROTEIN (1K	AVIAN RETROVIRUS BFLJ0	22-49							
PKY45_AVISY	TYROSINE KINASE TRANSF PROTEIN (YES	AVIAN SARCOMA VIRUS (STRAIN Y73)	199-233							
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	380-413							
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	384-413							
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	191-211							
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	206-233							
PLM01_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-233							
PLM01_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN CAO)	140-175							
PLM01_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN RAJI)	140-175							
PLM01_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	294-321							
PM0E1_SFVLA	NONA CAPPING ENZYME, LARGE SUBUNI	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-134	289-316	497-524	622-656				
PM0E1_VACCC	NONA CAPPING ENZYME, LARGE SUBUNI	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-112	291-318	630-657					
PM0E1_VACCV	NONA CAPPING ENZYME, LARGE SUBUNI	VACCINIA VIRUS (STRAIN WR)	85-112	291-318	630-657					
PM0E1_VAV	NONA CAPPING ENZYME, LARGE SUBUNI	VARIOLA VIRUS	85-112	291-318	630-657					
PM0E1_AUT01	NONA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	279-313							
PM0V2_CGMVS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN W)	176-199							
PM0V2_CGMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	176-199							
PM0V2_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	53-90							
PM0V2_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN L11A)	44-80							
PM0V2_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN L11)	44-80							
PMTC1_CHVNI	MODIFICATION METHYLASE CVIBI	CHLORELLA VIRUS NC-1A	142-170	229-256						
PMTC1_CHVPI	MODIFICATION METHYLASE CVIAJ	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	4-31	130-172						
PMTC_AVIAU	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	233-266	335-401						
PMTC_AVIMC	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	233-267	376-401						
PMTC_AVIMD	MTC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MH1	233-267	376-401						
PMTC_AVIME	MTC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MH2E21	219-248	377-404						
PMTC_AVIOK	MTC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	227-261	376-391						
PMTC_FLV	MTC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-420							
PMTC_FLVTT	MTC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-420							
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BERNE VIRUS	49-76	139-116						
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	85-111							
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SNOWSHOE HARE	96-123							
PNCAP_BUNYW	NUCLEOCAPSID PROTEIN	BUNYAMWERA VIRUS	48-75	189-220						

PGENE	10:1:1784	AA Viruses (no bacteriophages)	AREA 1	AREA 1	AREA 1	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PNCAP_CDSFV	NUCLEOCAPSID PROTEIN	CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE Ca8031)	223-271								
PNCAP_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	140-174								
PNCAP_CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN 1653514)	48-74								
PNCAP_CVCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	191-227								
PNCAP_CVPPU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD	191-227								
PNCAP_CVRM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH ISOLAT	191-227								
PNCAP_CVRM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RASH)	191-227								
PNCAP_DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	238-285								
PNCAP_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	182-209								
PNCAP_HAZVJ	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE JC380)	6-33	336-381							
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	4-31	74-108	112-141						
PNCAP_HRSVA	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PNCAP_LASV0	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	64-99	141-174							
PNCAP_LASV1	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	64-99	467-504							
PNCAP_LYCVA	NUCLEOCAPSID PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	64-97								
PNCAP_MACAV	NUCLEOCAPSID PROTEIN	MACHUPO VIRUS	41-68	192-219							
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	64-99								
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	377-404	435-483							
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	377-404	444-488							
PNCAP_PIIM	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885	376-403								
PNCAP_PITV	NUCLEOCAPSID PROTEIN	PUNTA TORO PHLEBOVIRUS	3-30								
PNCAP_PUUAH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	2-29								
PNCAP_PUUH5	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	2-29								
PNCAP_PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	93-130								
PNCAP_RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	133-167								
PNCAP_RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	133-167								
PNCAP_RABV5	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	133-167								
PNCAP_SENDS	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	363-404								
PNCAP_SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	363-404								
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	363-404								
PNCAP_SFSV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	4-31								
PNCAP_SV41	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	307-324								
PNCAP_TACV	NUCLEOCAPSID PROTEIN	TACAIUBE VIRUS	36-77								
PNCAP_TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	6-33								
PNCAP_UUK	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	68-102								
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	284-314								
PNCAP_VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MAKAH)	168-176	184-314							
PNCAP_VSVIG	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW	36-81								
PNCAP_VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN	67-94	338-361							
PNCAP_VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	36-81								
PNEF_HYIEL	NEGATIVE FACTOR	HUMAN BOANDODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-119								
PNEF_HYIND	NEGATIVE FACTOR	HUMAN BOANDODEFICIENCY VIRUS TYPE 1 (IND ISOLATE)	81-119								
PNEF_HYIZA	NEGATIVE FACTOR	HUMAN BOANDODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	86-124								
PNEF_SIVAJ	NEGATIVE FACTOR	SIMIAN BOANDODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRU-1)	96-133								
PNRAM_IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/760278)	47-81								
PNRAM_IACAO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82	33-64								
PNRAM_IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	16-43	50-91							
PNRAM_IADAI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	51-81								
PNRAM_IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	21-48								
PNRAM_IAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	10-48	52-80	197-224						
PNRAM_IAHKO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/COM/1974)	197-224	386-411							
PNRAM_IAHKI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	3-44	46-76	164-409						
PNRAM_IAJDE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	50-81								
PNRAM_IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1)	50-81								
PNRAM_IAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/1971-A/BELLANY/42N)	16-43	50-81							
PNRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	16-43	50-81							
PNRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	16-43								

PCCENE	IDENTIFIED	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS	49-88								
PMAM_IAVUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/UDDY TURNSTONE/NEW JERSEY/60/83)	49-88								
PMAM_IATKA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	49-81								
PMAM_IAUS3	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	50-81								
PMAM_IAWS0	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILDFOWL/ALBERTA/HP1/84)	49-88								
PMAM_IAWL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	18-43								
PMAM_DNBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	4-33								
PNS1_BDEV	PROB NONSTRUC PRO PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	285-310								
PNS1_BDEV	PROB NONSTRUC PRO PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	42-69								
PNS1_BNVN	NON-STRUCTURAL PROTEIN	INFATIENS NECROTIC SPOT VIRUS (STRAIN HL-87)	95-122								
PNS1_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE: PNIITIURK-81)	5-32	412-462							
PNS1_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN L)	5-32								
PNTP1_AMEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS	28-69								
PNTP1_CBEPV	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	122-166	347-374	524-551						
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	65-92	394-421	514-587						
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	65-92	394-421	514-587						
PNTP1_VAVV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	100-127	430-457	455-493						
PP100_HSVJU	MAJOR ANTIGENIC STRUCTL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	81-108	189-216	688-715	785-812					
PPA1_VACCC	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115								
PPA1_VACCV	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)	88-115								
PPA1_VAVV	POLY(A) POL CATALYTIC SUBUNIT	VARIOLA VIRUS	118-145								
PPA12_CAPVK	POLY(A) POL REG SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)	37-54								
PPA12_FOWPV	POLY(A) POL REG SUBUNIT	FOWLPOX VIRUS	61-105								
PPE11_NPVAC	11.1 KD PROTEIN IN PE 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	61-93								
PPE11_NPVOP	11.1 KD PROTEIN IN P26 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	204-248								
PPE38_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	6-38	51-78							
PPE38_NPVAC	41.3 KD IN PE-P26 INTERGENIC REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	96-123								
PPEN_ADECX	PENTON PROTEIN	AVIAN ADENOVIRUS GAL10 (STRAIN SA2)	1272-1299	1773-1802	2216-2243						
PPOL_BAYMG	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	1774-1801	2234-2261							
PPOL_BAYMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	481-508	1909-1941							
PPOL_CGMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS	178-197	634-657	951-985	1161-1195					
PPOL_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	1096-1123								
PPOL_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	17-44								
PPOL_BAYMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	240-281	801-828							
PPOL_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	240-267	801-828							
PPOL_CGMV	RNA2 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS	11-38								
PPOL_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	340-376								
PPOL_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	982-1009								
PPOLO_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	1030-1057	1143-1172							
PPOLO_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	639-660	1082-1113	1303-1330	2231-2261	2424-2503	2809-2836	3615-3642		
PPOLO_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	1303-1333	2143-2171	2519-2546	2802-2829	3123-3150				
PPOLO_BYDV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	96-123								
PPOLO_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	7-34	664-694	1062-1099	1900-1930					
PPOLO_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GREGG)	1040-1076								
PPOLO_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	643-672	141-868	1021-1057						
PPOLO_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	1024-1060	1881-1908							
PPOLO_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	644-673	1022-1058							
PPOLO_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	1024-1060								
PPOLO_CTVV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	120-154								
PPOLO_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE 5179/90)	1858-1885	2890-2917	2989-3016						
PPOLO_DEN2S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	1344-1371	1858-1885	2908-2935	2981-3016	3117-3147				
PPOLO_DEN3H	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN 16681-PDK53)	1344-1371	1858-1885	2908-2935	2908-2935	2982-3016	3117-3147			
PPOLO_DEN3J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN JAMAICA)	1344-1371	1858-1885	2908-2935	2981-3016	3116-3146	3241-3276			
PPOLO_DEN4P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4 (STRAIN PR159/81)	1344-1371	1858-1885	2905-2932	2976-3013	3116-3146	3241-3276			
PPOLO_DEN4T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4 (STRAIN TONGA 1974)	1116-1161	1440-1475							
PPOLO_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	837-864	1542-1569	1837-1864	2484-2511	2980-3014	3345-3372			
PPOLO_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	2883-2910	3837-3011	3343-3369						
PPOLO_ECHO	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	211-240								

BAD ORIGINAL

PCGENE	107217864	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
FILENAME	PROTEIN	VIRUS	70-108	1484-1518	1522-1561					
PROLO_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	70-97	1486-1520	1524-1563					
PROLO_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN ENC-B NONDIABETOGENIC)	70-97	1486-1520	1524-1563					
PROLO_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN ENC-D DIABETOGENIC)	70-108							
PROLO_ENMG	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 37A)	3-41							
PROLO_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	302-339	1118-1146						
PROLO_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	301-338	1119-1146						
PROLO_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	1118-1146							
PROLO_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND O1BFS)	101-138							
PROLO_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU/C-58)	702-739	1195-1233	1203-1237	1434-1461	1868-1893	1906-1940		
PROLO_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	699-726	1195-1233	1064-1095	1106-1140	1532-1558			
PROLO_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	699-726	1195-1233	1064-1095	1106-1140	1532-1558			
PROLO_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	702-739	1045-1082						
PROLO_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	702-739	1045-1082						
PROLO_HCVJ	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE J)	702-739	1045-1082						
PROLO_HCVJK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JK)	124-401	2089-2116						
PROLO_HCVJS	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JK-JS)	1049-1076	2089-2116						
PROLO_HCVJS	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JK-JS)	338-401	2089-2116						
PROLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE)	702-739	1045-1082	1045-1073					
PROLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	702-739	1045-1082						
PROLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	702-739	1045-1082	1045-1073					
PROLO_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 2AA)	203-237	1021-1048	1117-1149	1454-1481				
PROLO_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 4IC)	203-237	1021-1048	1021-1048	1117-1149	1454-1481			
PROLO_HPAVI	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN IIF)	203-237	1021-1048	1117-1149	1454-1481				
PROLO_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CRL26)	203-237							
PROLO_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	182-216							
PROLO_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	203-237	1021-1048	1101-1149					
PROLO_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	203-237	1021-1048	1101-1149					
PROLO_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	203-237	1021-1048	1101-1149					
PROLO_HPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	203-241	1025-1052	1115-1152					
PROLO_HPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	203-237							
PROLO_HRV14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14	17-46	559-586	652-679	1277-1304				
PROLO_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B	1132-1159	1855-1882						
PROLO_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2	1125-1152	1532-1559						
PROLO_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89	883-910	1141-1168	1566-1607	1862-1889				
PROLO_HEV7	STRUCTURAL POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670971)	876-910							
PROLO_BDVO	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	211-237							
PROLO_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	214-248	983-1010	1796-1823					
PROLO_JAEV3	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	214-248	983-1010	1796-1823					
PROLO_JAEVJ	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JaOArS982)	214-248	983-1010	1796-1823					
PROLO_JASTN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	141-175	911-938						
PROLO_KUNJM	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	980-1007							
PROLO_LANYF	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	411-445	1614-1661						
PROLO_LANYY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN YELANTSEV)	411-445							
PROLO_LIV	GENOME POLYPROTEIN	LOUPING ILL VIRUS	411-445							
PROLO_LIV58	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 316)	1131-1183							
PROLO_MCFA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT	671-698	1036-1083	1101-1130					
PROLO_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS	10-37							
PROLO_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	212-256							
PROLO_OMV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	24-51	946-973						
PROLO_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	377-404	984-338	931-858	900-927	1187-1201	1485-1512	1787-1814	2433-2464
PROLO_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1060-1100	1901-1931						
PROLO_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	690-697	1043-1101	1903-1933					
PROLO_POL2L	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1061-1099	1901-1931						
PROLO_POL3W	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN W-3)	1061-1099	1901-1931						
PROLO_POLIJ	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 3)127)	1060-1098	1900-1930						
PROLO_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS PJLEON/37 AND PJLEON 12A[1]B)	1060-1098	1900-1930						
PROLO_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	911-948	1498-1535	2371-2398					
PROLO_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	1146-1183							

BAD ORIGINAL

PCGENE	10?s17?s4	All Viruses (no bacteriophage!)	AREA1	AREA1	AREA1	AREA 4	AREA 5	AREA 4	AREA 2	AREA 1	AREA 2
ID# NAME	PROTEIN	VIRUS									
PROLO_PPVMA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	920-947	1493-1524	2170-2190						
PROLO_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	920-947	1497-1524	2170-2197						
PROLO_PLSV1I	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA)	590-337								
PROLO_PLSV1I	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA 5-1)	591-418								
PROLO_PLSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	418-316								
PROLO_PLSVW	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPD1)	771-313	1132-1177	1510-1557						
PROLO_PSBMV	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O (PVY°)	413-460	701-733							
PROLO_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	218-245	433-460	701-733	1486-1513	1777-1811				
PROLO_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	413-460	701-733	1486-1513	1777-1811					
PROLO_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	413-460	701-733							
PROLO_PVYV1	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	1124-1151	2707-2734							
PROLO_SUMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	10-37								
PROLO_SVDVH	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN IVS 76)	1024-1060								
PROLO_SVDVU	GENOME POLYPROTEIN	1024-1060									
PROLO_TBEVU	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SUOJIN)	87-131	234-272	1632-1666	2263-2292	2909-2936				
PROLO_TBEVW	GENOME POLYPROTEIN	BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	1632-1659								
PROLO_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS	145-172	1148-1175	1416-1443	1773-1800					
PROLO_THEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN 8186)	78-111	200-237							
PROLO_THEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	90-117	200-237							
PROLO_THEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	90-117	200-237							
PROLO_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	233-261	773-800							
PROLO_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	406-433	670-704	2708-2742						
PROLO_WMV1	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	202-229	200-237							
PROLO_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	210-254	2185-2412							
PROLO_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	436-463								
PROLO_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	436-463								
PROLO_ZYMV	GENOME POLYPROTEIN	ZUCCHINI YELLOW MOSAIC VIRUS	68-96								
PPOLN_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1063-1101	1903-1933							
PPOLN_EEVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1402-1467	1894-1921							
PPOLN_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 FIV)	445-472								
PPOLN_FCV79	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	1014-1061								
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	219-246	349-376							
PPOLN_HEVMX	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	219-246	349-376							
PPOLN_HEVMY	N-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	219-246	349-376							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	218-245	348-375							
PPOLN_MDBDV	NONSTRUCTURAL POLYPROTEIN	MOUSE DEFECTIVE INTERFERING VIRUS	935-982								
PPOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	2451-2480								
PPOLN_RUBDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	1113-1147	1651-1684							
PPOLN_RVN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	1037-1084	1437-1504	2418-2445						
PPOLN_RVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	1037-1084	1437-1504							
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN TRE1/EN)	144-171	1087-1114							
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1060-2087								
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1134-1181								
PPOLN_WEEV	NONSTRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	936-976								
PPOLS_BDV1	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 2512)	4-31								
PPOLS_BDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	231-258								
PPOLS_BDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	231-258								
PPOLS_BDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	231-258								
PPOLS_BDVP	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN P2G-98)	213-239								
PPOLS_BDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	231-258								
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	356-383								
PPOLS_RUVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	938-971								
PPOLS_RUVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	938-971								
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1138-1165								
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	1138-1165								
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	938-967								
PPOL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	675-708	915-942							

BAD ORIGINAL

ECGENE (1)(2)(3)(4)	All Viruses (no bacteriophages)									
GENENAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 1	AREA 2	AREA 2	AREA 2	AREA 2	AREA 2
/POL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	884-924							
/POL_EQYMV	PUTATIVE POLYPROTEIN	COCKEREL YELLOW MOTTLE VIRUS	333-360	838-865	1075-1102	1178-1205	1313-1340			
/POL_ELAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	472-505	826-853						
/POL_ELAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	472-505	826-853						
/POL_ELAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	471-504	825-852						
/POL_FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	532-599	837-904						
/POL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	442-493							
/POL_FMVD	ENZYMATIC POLYPROTEIN	FOWLPOX MOSAIC VIRUS (STRAIN DIS)	401-430							
/POL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	535-562	676-703						
/POL_HTL1A	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	674-713							
/POL_HTL1C	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	674-713							
/POL_HVIA2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	218-245	630-661						
/POL_HVIB1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	210-237	637-671						
/POL_HVIB1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH5 ISOLATE)	210-237	633-673						
/POL_HVIBK	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	210-237	631-671						
/POL_HVIEL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	217-244	624-660						
/POL_HVIH2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (IIIXD2 ISOLATE)	218-245	630-661	921-951					
/POL_HVIJR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	222-249	634-665						
/POL_HVIMA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MAL ISOLATE)	217-244	626-510	619-660					
/POL_HVIMN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MN ISOLATE)	221-248	633-664						
/POL_HVIN5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NEW YORK-5 ISOLATE)	218-245	633-661						
/POL_HVIND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NDK ISOLATE)	217-244	624-660						
/POL_HVIOY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (OYI ISOLATE)	218-245	628-661						
/POL_HVIPV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (PV22 ISOLATE)	220-257	637-673						
/POL_HVIRM	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RF/HTLV ISOLATE)	217-244	619-660						
/POL_HVIUA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (STRAIN UGANDAN/ ISOLATE U	217-244	333-360	619-660					
/POL_HVIZ3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (Z2/CDC-234 ISOLATE)	217-244	619-660						
/POL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE DEN)	491-522							
/POL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1)	471-502							
/POL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	509-540							
/POL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.2)	491-548							
/POL_HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	471-502							
/POL_HV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	471-529							
/POL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	472-503							
/POL_HV2S1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	473-562							
/POL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-582							
/POL_DHA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	200-237	334-381	461-499					
/POL_DMA	PUTATIVE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	211-238	302-339	400-437					
/POL_DMAJ	PROBABLE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	130-157	221-258						
/POL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	204-231							
/POL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	693-480							
/POL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	803-833							
/POL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	716-743	805-832						
/POL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-128	190-217						
/POL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	574-612	870-897						
/POL_OMVV5	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	83-94	411-503	871-900					
/POL_RSVP	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	797-824							
/POL_RTBV	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	7-44	59-91	176-203	202-229	410-437	447-476	1022-1049	
/POL_RTBVP	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	7-44	59-91	176-203	202-229	410-437	447-476	1022-1049	
/POL_SFV1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	432-454							
/POL_SIVA1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	431-458	547-574	837-871					
/POL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 66 ISOLATE)	43-72							
/POL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	11-98							
/POL_SIVAO	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	410-443	432-516	647-669					
/POL_SIVAJ	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GM1.1)	478-515							
/POL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	457-491							
/POL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	243-269	626-685						

BEST AVAILABLE COPY

PCGENE	187a178s4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE G01)	227-254	636-670							
PPOL_SIVMI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	533-560								
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	533-560								
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMM14 ISOLATE)	496-523								
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE)	499-526								
PPOL_SMRVH	POL POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	601-628								
PPOL_SOCMV	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	268-295	348-419							
PPOL_SRV1	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	578-612	670-693							
PPOL_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	490-524	881-919							
PPOL_VILV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	89-116	490-524	881-919						
PPOL_VILV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	490-524	881-919							
PPR73_MMTVB	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	288-315								
PPR73_MMTVC	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	45-79								
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	167-201								
PPYHD_CPVBM	POLYHEDRIN PRECURSOR	BOMBYX MORI CYTOPLASMIC POLYHEDROSIS VIRUS	37-71								
PPYHD_NPVAC	POLYHEDRIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	13-47								
PPYHD_NPVAS	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDROSIS VIRUS	14-48	201-228							
PPYHD_NPVBM	POLYHEDRIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	12-46								
PPYHD_NPVBS	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVHC	POLYHEDRIN	HYPHANTRIA CUNEA NUCLEAR POLYHEDROSIS VIRUS	13-40								
PPYHD_NPVLD	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVMB	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVOP	POLYHEDRIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	13-47								
PPYHD_NPVOS	POLYHEDRIN	ORGYIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVPF	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS VIRUS	14-48								
PPYHD_NPVSE	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	14-48								
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA FRUGIPERDA NUCLEAR POLYHEDROSIS VIRUS	14-48								
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	41-68								
PREV_VILV	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	22-62								
PRIR1_ASFM2	RIBONUC-DIPHOSPH REDUCT LARGE CHA	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL. 20/1)	7-41	88-119	163-190						
PRIR1_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	622-649								
PRIR1_HSVEB	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75-102								
PRIR1_HSV1A	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN 11)	324-351								
PRIR1_VACCC	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-401								
PRIR1_VACCV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN WR)	367-401								
PRIR1_VARV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARIOLA VIRUS	367-401								
PRIR1_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146								
PRIR2_HSVBJ	RIBONUC-DIPHOSPH REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN J4)	90-117								
PRPM_VACCV	RNA-POL-ASSOC TRANS SPEC FACTOR	VACCINIA VIRUS (STRAIN WR)	41-68	513-540							
PRPM4_VARV	RNA-POL-ASSOC TRANS SPEC FACTOR	VARIOLA VIRUS	41-75	77-104	513-540						
PRPO1_VACCC	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN COPENHAGEN)	237-264	587-616	810-837	961-992					
PRPO1_VACCV	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN WR)	237-264	587-616	810-837	961-992	1011-1038				
PRPO1_VARV	DNA-DIRECTED RNA POL 147 KD	VARIOLA VIRUS	237-264	587-616	810-837	961-992					
PRPO2_CAPVK	DNA-DIRECTED RNA POL 132 KD	CAPRIPOXVIRUS (STRAIN KS-1)	19-45	114-155							
PRPO2_COWPX	DNA-DIRECTED RNA POL 132 KD	COWPOX VIRUS	211-241	481-509							
PRPO2_VACCV	DNA-DIRECTED RNA POL 132 KD	VACCINIA VIRUS (STRAIN WR)	211-241	481-509							
PRPO2_VARV	DNA-DIRECTED RNA POL 132 KD	VARIOLA VIRUS	211-241	481-509							
PRPO4_CAPVK	DNA-DIRECTED RNA POL 35 KD	CAPRIPOXVIRUS (STRAIN KS-1)	36-63								
PRPO7_VACCV	DNA-DIRECTED RNA POL 19 KD	VACCINIA VIRUS (STRAIN WR)	8-35	43-70							
PRPO7_VARV	DNA-DIRECTED RNA POL 19 KD	VARIOLA VIRUS	43-70								
PRPOA_LELV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1533-1560								
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	888-915	1639-1673							
PRPP1_IAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	575-602								
PRPP1_IAANN	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	119-146								
PRPP1_IADHO	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/1/80)	119-146								
PRPP1_IAFPR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	119-146								
PRPP1_IAGU2	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	119-146								

PCGENE	1078178t4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRP3_IAHLO	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	119-146								
PRRP3_IAHTE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/80)	119-146								
PRRP3_IAKOR	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	119-146								
PRRP3_IALE1	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	119-146								
PRRP3_IALE2	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	119-146								
PRRP3_IAMAN	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	119-146								
PRRP3_IANT6	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	119-146								
PRRP3_IAPI0	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	119-146								
PRRP3_IAPUE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	119-146								
PRRP3_IARUD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	119-146								
PRRP3_IASIN	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	119-146								
PRRP3_IATKM	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	119-146								
PRRP3_IAVIT	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	119-146	327-354							
PRRP3_IAWIL	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	119-146								
PRRP3_IAZH2	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	119-146								
PRRP3_IAZIU	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1126/82)	119-146								
PRRP3_IAZI1	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	119-146								
PRRP3_IAZTT	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/26/77)	119-146								
PRRP3_INBAC	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	157-194								
PRRP3_INBAD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	164-194								
PRRP3_INBSI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	157-194								
PRRP3_IABUD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	537-567								
PRRP3_IACHI	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	331-358								
PRRP3_IAEQR	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	331-361	480-507							
PRRP3_IAZTE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	487-514								
PRRP3_INBAC	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	2-33	472-509							
PRRP3_INBAD	RNA-DIRECTED RNA POL SUB P3	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	2-33	472-509							
PRRP3_INCBE	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	509-536								
PRRP3_INCJJ	RNA-DIRECTED RNA POL SUB P3	INFLUENZA C VIRUS (STRAIN C/JJ/50)	509-536								
PRRP3_THOGV	RNA-DIRECTED RNA POL SUB P3	THOGOTO VIRUS	149-176	358-385							
PRRPA_CVHR2	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	516-543	726-751	1971-2008	3781-3811					
PRRPA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	624-651	4326-4353							
PRRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERNE VIRUS	27-54	537-584	943-984						
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	885-915	1129-1170							
PRRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	885-915	1129-1170							
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772	20-47	353-380	385-412						
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1510-1547	2296-2331	2547-2574						
PRRPB_IBVK	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB5123)	165-200	416-443							
PRRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	1032-1059								
PRRPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	80-114	317-350	1802-1861	1892-1919					
PRRPL_CDVO	RNA POLYMERASE BETA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	24-51								
PRRPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118)	404-433	461-510	564-591	738-765	905-948	1993-2020			
PRRPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	103-192	210-237	667-694	788-815	1007-1034	1138-1165	1455-1480	1776-1803	2062-2089
PRRPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	991-1018	1163-1170	1490-1524	1811-1838	2029-2067	2216-2266			
PRRPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	991-1018	1490-1524	2239-2267						
PRRPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	95-122	196-223	2121-2148						
PRRPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	111-142	780-807	1602-1632						
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/43)	250-284	477-504	1979-2013						
PRRPL_PIHT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIBA)	322-349	1564-1598	1687-1721	1901-1946					
PRRPL_PIHM	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	52-86	136-163	608-638	1081-1123	1994-2036	2115-2142			
PRRPL_PUUMH	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	388-415	557-591	731-758	864-891	926-953	1940-1971	1998-2025		
PRRPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	204-231	605-632	2068-2123						
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	204-231	605-632	2068-2123						
PRRPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	855-882								
PRRPL_RVFV2	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	1536-1563	1653-1687							
PRRPL_SEND5	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	629-656	1082-1116	1729-1756	2145-2180					
PRRPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	449-476	902-936	1549-1576	1965-2000					

PCGENE	107x17826	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	629-656	1062-1116	1729-1756	2145-2180					
PRRPL_SEOUI	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	461-488	564-591	731-758	905-932					
PRRPL_SVSWR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	1096-1123	1250-1277	1680-1710	2120-2147					
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	825-858	1092-1119	1490-1520	1973-2000	2080-2107				
PRRPL_TSWVB	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNIII/BR-01)	477-504	542-575	1119-1150	1195-1229	1330-1357	1415-1442	1671-1698	1857-1884	2093-2110
			2166-2193	2324-2368	2771-2798						
PRRPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS	142-187	1037-1071	1304-1331						
PRRPL_VSVIH	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN HAZELHU	1530-1557	1809-1836							
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	1205-1232	1809-1836							
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	1540-1567	1768-1798							
PRRPO_ACLSV	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	228-264	564-591							
PRRPO_BWYVF	PUTATIVE RNA-DIR RNA POL	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	336-383								
PRRPO_BYDVI	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE RMV-PS1)	772-799								
PRRPO_BYDVP	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	772-799								
PRRPO_BYDVR	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	772-799								
PRRPO_CARMV	PUTATIVE RNA-DIR RNA POL	CARNATION MOTTLE VIRUS	93-127	277-304	667-694						
PRRPO_CGMVS	PUTATIVE RNA-DIR RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	387-414	1040-1067							
PRRPO_IBDVS	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN S2/70)	336-363	392-419							
PRRPO_IBDVA	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	661-688	717-744							
PRRPO_IPNVJ	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	773-800								
PRRPO_IPNVS	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	773-800								
PRRPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	834-886	1052-1079							
PRRPO_PPMVS	PUTATIVE RNA-DIR RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	402-429	709-736	1072-1099						
PRRPO_REOVD	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	61-88								
PRRPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	61-88								
PRRPO_ROTBR	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	68-95	218-245	791-818						
PRRPO_ROTBU	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	65-95	218-245	791-841	975-1002					
PRRPO_ROTPC	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	3-44	75-102	363-390	543-585					
PRRPO_ROTPO	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED	65-95	102-129	791-839	973-1002					
PRRPO_ROTSI	RNA-DIR RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	65-95	791-839	975-1002						
PRRPO_SCVLA	RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	147-188								
PRRPO_TACV	RNA POLYMERASE	TACARIBE VIRUS	183-204	241-271	1107-1134	1978-2008					
PRRPO_TMGMV	PUTATIVE RNA-DIR RNA POL	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	230-257	1316-1343	1397-1424						
PRRPP_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-133								
PRRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	315-370								
PRRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141								
PRRPP_HRSVI	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	99-141								
PRRPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141								
PRRPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141								
PRRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-370								
PRRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	315-370								
PRRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	315-370								
PRRPP_PIIHB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CJ3)	84-111	234-261	375-416						
PRRPP_PIIHC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CJ9)	84-111	234-261	375-416						
PRRPP_PIIHD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	84-111	232-262	375-416						
PRRPP_PIIHE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	84-111	244-271	375-416						
PRRPP_PIIH	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	167-194	222-256							
PRRPP_PIIHT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIDA)	167-194	222-256							
PRRPP_PIIB	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	34-91	255-282	285-314						
PRRPP_PIIH4	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	114-141	269-299							
PRRPP_PI4HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIDA)	4-38								
PRRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127								
PRRPP_SEND5	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	330-357	379-420							
PRRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 6/94)	330-357	379-420							
PRRPP_SEND4	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN FUSHIMI)	330-357	379-420							
PRRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	330-357	379-420							
PRRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	330-357	379-420							

PCGENE	187a178a4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRPP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	205-232	236-263							
PSODC_VACCV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	72-99								
PSODC_VARV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	72-99								
PSPHR_AMEPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPOXVIRUS	91-118	140-167	227-261	361-390					
PSPI1_MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	286-313								
PSPI2_VACCV	SERINE PROTEINASE INHIBITOR 2	VACCINIA VIRUS (STRAIN WR)	59-86								
PSPIA_VACCC	SERINE PROTEASE INH 2 HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-45								
PTSC2_CHVP1	TYPE II RESTRICTION ENZYME CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	16-43								
PTAA2_VACCV	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS	95-133								
PTAG8_FOWPV	TRANS-ACTIVATOR PROTEIN FP9	FOWLPOX VIRUS	3-51								
PTAG8_VACCV	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS	3-30								
PTAG8_VARV	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-30								
PTALA_BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-318								
PTALA_POVBO	LARGE T ANTIGEN	BOVINE POLYOMAVIRUS	502-537								
PTALA_POVHA	LARGE T ANTIGEN	HAMSTER POLYOMAVIRUS	587-621								
PTALA_POVLY	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMAVIRUS	224-258	616-684							
PTALA_POVMJ	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	513-540								
PTALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	511-538								
PTALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	508-535								
PTATR_NPVAC	TRANS-ACT TRANS REG PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	407-434	489-523	532-559						
PTATR_NPVBM	TRANS-ACT TRANS REG PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	412-439	494-528	537-564						
PTATR_NPVOP	TRANS-ACT TRANS REG PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	512-554								
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145-172	1215-1242	1344-1371	1876-1903					
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1251-1281	2202-2229							
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667-694	1673-1710							
PTEGU_HSV6G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	102-129	228-262	567-611	962-993	1098-1131	1661-1688	1884-1911		
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	229-256	566-593	1205-1232						
PTEGU_HSVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	524-607	672-700	777-814	846-898	949-986	990-1017	1467-1497	2102-2135	
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1021-1158	1539-1609							
PTERM_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	375-413								
PTMAF_AVIS4	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOAPONEUROTIC FIBROSARCOMA VIRUS AS42	302-336								
PTOP1_SFVKA	DNA TOPOISOMERASE I	SHOPE FIBROMA VIRUS (STRAIN KASZA)	38-65	132-176							
PTOP1_VACCV	DNA TOPOISOMERASE I	VACCINIA VIRUS	38-65								
PTOP1_VARV	DNA TOPOISOMERASE I	VARIOLA VIRUS	38-65								
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	902-936								
PTYSY_HSVAT	THYMIDYLATE SYNTHASE	HERPESVIRUS ATELES	116-143								
PTYSY_HSVSA	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN 11)	120-147								
PUL06_EBV	VIRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	313-340	542-569						
PUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	586-613								
PUL06_HSVEB	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640-667								
PUL06_HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	15-42	302-358	368-402						
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47								
PUL11_EBV	HYPOTHETICAL PROTEIN BBLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	15-42								
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PUL14_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	247-286								
PUL14_VZVD	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101								
PUL16_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-112								
PUL30_HCMVA	HYPOTH PRO UL30 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PUL31_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PUL31_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	380-407								
PUL31_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	34-61	204-231	362-389						
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	167-194	254-284							
PUL33_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	345-375								
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-143								
PUL34_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	208-235								
PUL34_VZVD	VIRION GENE 24 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	112-139								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-562								

PCGENE	107a19a4	All Viruses (no bacteriophages)	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
FILENAME	PROTEIN	VIRUS	(470-497	(513-484						
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	715-749	987-1014						
PUL37_HSV2B	GENE 33 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	31-43	683-737						
PUL37_HSV1A	GENE 61 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	107-134	485-511	738-746	976-1003				
PUL37_VZVD	GENE 33 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	330-364							
PUL37_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	331-358							
PUL37_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	124-136	112-349						
PUL37_VZVD	GENE 33 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	114-141	448-485	761-790	810-853				
PUL37_HCMVA	PROTEIN UL42	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	488-515							
PUL37_HSV11	VIRION PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	488-515							
PUL37_HSV1F	VIRION PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	180-207							
PUL37_HSV2B	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	159-186							
PUL38_HCMVA	PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	185-213	787-814						
PUL39_EBV	DNA DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	103-130	943-970						
PUL39_HSV2B	DNA REPLICATION PROTEIN UL39	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	130-157							
PUL39_HSV1A	PROB DNA REP GENE 44 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	101-337							
PUL39_VZVD	PROB DNA REP GENE 8 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	74-101							
PUL39_HCMVA	HYPOTHETICAL PROTEIN UL39	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-92							
PUL39_HCMVA	PROB DNA REP PROTEIN UL39	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-33							
PUL3A_HCMVA	UL3A GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	9-36							
PUL3B_HCMVA	HYPOTHETICAL GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	45-79							
PUL3C_HCMVA	HYPOTHETICAL PROTEIN UL3C	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	409-436							
PUL3C_EBV	HYPOTHETICAL PROTEIN BCRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	536-563	739-768						
PUL3D_HSV2U	HYPOTHETICAL PROTEIN 5R	HERPESVIRUS SAIMIRI (TYPE 6 / STRAIN UGANDA-1102)	503-499							
PUL3E_HSV1A	HYPOTHETICAL GENE 28 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	107-134	168-196						
PUL3F_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-123							
PUL3G_HSV1A	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	26-53	314-381						
PUL3H_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	337-71							
PUL3I_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	73-100	105-134						
PUL3J_HSV2U	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	4-31	443-417						
PUL4A_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	333-78							
PUL3B_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	99-126							
PUL3D_HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	133-174							
PUN0_HSV2A	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	81-115							
PUN0_EPVLA	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	83-116	128-156						
PUN0_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	83-116	128-156						
PUN0_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	83-116							
PUN0_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	83-116							
PU509_HCMVA	HYPOTHETICAL PROTEIN HCMVF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	20-47							
PU509_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	377-508							
PU511_HCMVA	MEMBRANE PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-318							
PU511_ASFL5	L15 131-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L1557)	2-29							
PV131_AMYLE	123 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	702-729							
PV131_ASFL5	L15 137 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L1557)	2-29							
PV13C_TRVTL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	59-86							
PV140_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	486-540	941-972						
PV16K_TRVPS	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	79-111							
PV1A_BMMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	21-54	710-737	840-868					
PV1A_BMV	1A PROTEIN	BROME MOSAIC VIRUS	22-51	384-411	816-843	892-919				
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	210-376							
PV1A_CMVN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-38	864-902						
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	11-38							
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-38							
PV1A_PSTV	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	4-31	373-399						
PV1A_TAV	1A PROTEIN	TOMATO ASPERMY VIRUS	11-38	271-298	776-403	857-884				
PV21K_NPVAC	21 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-31							
PV29K_HBV	29 KD PROTEIN	PEA EARLY BROWNING VIRUS	160-170							
PV29K_TRVST	29 KD PROTEIN	TOBACCO RATTLE VIRUS	160-197							

BAD ORIGINAL

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PV29K_TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	48-75								
PV2A_BBMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	301-328								
PV2A_CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	178-205								
PV2A_CMVFN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	792-819								
PV2A_PSVI	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN I)	325-352	717-751							
PV2A_TAV	2A PROTEIN	TOMATO ASPERMY VIRUS	313-340	722-756							
PV30K_HCMVE	30 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	194-221								
PV30K_TRVTC	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	130-160								
PV33P_ADE41	33 KD PHOSPHOPROTEIN	HUMAN ADENOVIRUS TYPE 41	15-42								
PV362_ASFB7	K'362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	75-102								
PV363_ASFB7	D'363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	3-30	172-199							
PV3A_BMV	3A PROTEIN	BROME MOSAIC VIRUS	11-38								
PV3A_CMVFN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	222-252								
PV3A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	217-252								
PV3A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	222-253								
PV3A_CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	222-253								
PV3A_IBVB	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	25-57								
PV3A_IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/181/66)	29-56								
PV3B_IBVB	3B PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	6-33								
PV50K_BYDVP	50 KD PROTEIN	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	119-146								
PV51K_BWYVF	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	113-147	424-451							
PV51K_BWYVG	51 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GDI)	113-147	424-451							
PV54K_PLRV1	54 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	124-151	438-472							
PV54K_PLRVW	54 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	124-151	438-477							
PV58K_BSMV	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-155								
PV70K_PLRV1	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	110-140								
PV70K_PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	110-140								
PV90K_AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-134								
PVA06_VACCC	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	157-216	250-277	283-310	314-355					
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	156-215	249-276	282-309	313-354					
PVA06_VARV	PROTEIN A6	VARIOLA VIRUS	157-216	250-277	283-310	314-355					
PVA08_VACCC	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-206								
PVA08_VARV	PROTEIN A8	VARIOLA VIRUS	176-206								
PVA09_VARV	PROTEIN A9	VARIOLA VIRUS	60-95								
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	219-283								
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	220-284								
PVA18_VARV	54 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	440-467								
PVA20_VACCC	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	8-67	330-357							
PVA20_VARV	PROTEIN A20	VARIOLA VIRUS	8-67	330-357							
PVA22_VACCC	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	45-72								
PVA22_VARV	PROTEIN A22	VARIOLA VIRUS	56-83								
PVA23_VACCC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-144								
PVA23_VARV	PROTEIN A23	VARIOLA VIRUS	95-144								
PVA28_VACCV	PROTEIN A28	VACCINIA VIRUS (STRAIN WR)	22-49								
PVA28_VARV	PROTEIN A28	VARIOLA VIRUS	22-49								
PVA30_VACCV	PROTEIN A30	VACCINIA VIRUS (STRAIN WR)	12-55								
PVA31_VACCC	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115								
PVA31_VARV	PROTEIN A31	VARIOLA VIRUS	88-122								
PVA34_VACCC	PROTEIN A34	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-114								
PVA34_VACCV	PROTEIN A34	VACCINIA VIRUS (STRAIN WR)	87-114								
PVA34_VARV	PROTEIN A34	VARIOLA VIRUS	87-114								
PVA36_VACCV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	120-155								
PVA36_VARV	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	127-154								
PVA38_VACCC	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-81								
PVA38_VACCV	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	44-81								
PVA38_VARV	PROTEIN A38	VARIOLA VIRUS	44-91								
PVA39_VACCC	PROTEIN A39	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71	155-182							

PCGENE	107a17814	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVA39_VACCV	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	75-109	193-220							
PVA43_VACCC	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	145-172								
PVA43_VACCV	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	145-172								
PVA43_VARV	PROTEIN A43	VARIOLA VIRUS	146-173								
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	143-184								
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	143-184								
PVA47_VARV	PROTEIN A47	VARIOLA VIRUS	142-184								
PVA49_VACCC	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	61-91								
PVA49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	61-91								
PVA49_VARV	PROTEIN A49	VARIOLA VIRUS	61-91								
PVA55_VACCC	PROTEIN A55	VACCINIA VIRUS (STRAIN COPENHAGEN)	55-82	126-156	435-462						
PVA55_VACCV	PROTEIN A55	VACCINIA VIRUS (STRAIN WR)	55-82	126-156	435-462						
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS	22-49								
PVAL3_CLVK	AL3 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	79-106								
PVAL3_CLVN	AL3 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	79-106								
PVAL3_SLCV	AL3 PROTEIN	SQUASH LEAF CURL VIRUS	101-128								
PVAL3_TYLCV	AL3 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	79-129								
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	93-129							
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70								
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	93-129							
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	93-129							
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	93-129							
PVAT_CAMVS	APHID TRANSMISSION PROTEIN		22-70	93-130							
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	36-70								
PVAT_CERV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	102-138								
PVAT_FMVD	APHID TRANSMISSION PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	52-82	103-130							
PVB03_VACCV	PROTEIN B3	VACCINIA VIRUS (STRAIN WR)	108-135								
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	92-123	182-211	286-313	324-361					
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	92-123	182-211	286-313	324-361					
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	89-127	182-211	286-313	324-361					
PVB05_VACCO	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN LC16MO)	254-284								
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN COPENHAGEN)	254-284								
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN LISTER)	254-284								
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PRO PREC	VACCINIA VIRUS (STRAIN WR)	254-284								
PVB07_VACCV	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	28-62								
PVB08_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-53								
PVB08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	26-53								
PVB11_VACCC	PROTEIN B11	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-54								
PVB11_VACCV	PROTEIN B11	VACCINIA VIRUS (STRAIN WR)	5-38								
PVB16_COWPX	IL-1 BIND PRO PRECURSOR	COWPOX VIRUS	113-140								
PVB17_VACCC	PROTEIN B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	258-285								
PVB17_VACCV	PROTEIN B17	VACCINIA VIRUS (STRAIN WR)	258-285								
PVB18_VACCC	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375								
PVB18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375								
PVB18_VARV	PROTEIN B18	VARIOLA VIRUS	337-378								
PVB19_VACCC	SURFACE ANTIGEN 5 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	182-212								
PVB19_VACCD	SURFACE ANTIGEN 5 PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	180-210								
PVB19_VACCV	SURFACE ANTIGEN 5 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	180-210								
PVB19_VARV	SURFACE ANTIGEN 5 PRECURSOR	VARIOLA VIRUS	180-210								
PVB20_VACCC	PROTEIN B20	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-82								
PVB21_VACCV	PROTEIN B21	VACCINIA VIRUS (STRAIN WR)	64-91								
PVBL1_BGMV	BL1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	120-147	248-275							
PVBL1_CLVK	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	118-145								
PVBL1_CLVN	BL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	118-145								
PVBL1_PYMVV	BL1 PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	120-147								
PVC02_VACCC	PROTEIN C2	VACCINIA VIRUS (STRAIN COPENHAGEN)	405-432								
PVC02_VACCV	PROTEIN C2	VACCINIA VIRUS (STRAIN WR)	41-71	405-432							

PCGENE	1087178z4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVC04_SFVKA	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	209-236	484-515							
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46								
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46								
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	12-46								
PVC05_SFVKA	HYPOTHETICAL PROTEIN C5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	85-125	152-179							
PVC05_VACCC	PROTEIN C5	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-65								
PVC05_VACCV	PROTEIN C5	VACCINIA VIRUS (STRAIN WR)	38-65								
PVC05_VARV	PROTEIN C5	VARIOLA VIRUS	36-66								
PVC07_VACCV	PROTEIN C7	VACCINIA VIRUS (STRAIN WR)	80-111								
PVC07_VARV	PROTEIN C7	VARIOLA VIRUS	80-111								
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-69	82-116	178-205	252-279	289-325	575-605			
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	42-69	82-116	178-205	252-279	289-323	575-605			
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180								
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-163								
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	136-163								
PVC13_SFVKA	PROTEIN C13	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-30	39-66	137-182	206-240					
PVC17_VACCC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	111-152								
PVC18_VACCC	PROTEIN C18/B24	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-74								
PVC19_SFVKA	PROTEIN C19	SHOPE FIBROMA VIRUS (STRAIN KASZA)	56-97								
PVC20_VACCC	PROTEIN C20/B26	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-99								
PVC22_VARV	PROTEIN C22/B28 HOMOLOG	VARIOLA VIRUS	299-326								
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	847-874								
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	136-170	355-382							
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	769-799								
PVCGJ_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-165	199-248							
PVCOM_ADE02	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 2	88-115								
PVCOM_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	87-114								
PVD05_FOWP1	92.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	6-33	184-211	321-348						
PVD05_VACCC	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	240-267	333-360							
PVD05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	240-267								
PVD05_VARV	PROTEIN D5	VARIOLA VIRUS	240-267								
PVD09_VACCC	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-150								
PVD09_VACCV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	123-150								
PVD09_VARV	PROTEIN D9	VARIOLA VIRUS	123-160								
PVD10_SFVKA	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	18-52								
PVDBP_CERV	DNA-BINDING PROTEIN	CARNATION ETCHED RING VIRUS	2-33								
PVE02_VARV	PROTEIN E2	VARIOLA VIRUS	282-322								
PVE06_VACCC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-116	437-464							
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	89-116	437-464							
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	89-116	367-394	437-464						
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	60-87								
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	21-48								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	180-207								
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	103-130								
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	55-89								
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	25-59								
PVE1_HPV47	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	146-173								
PVE1_HPV57	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	21-48								
PVE26_NPVAC	EARLY 25.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	72-113								
PVE2_CRPVK	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	5-34								
PVE2_HPV05	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	17-51								
PVE2_HPV13	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	157-184	334-361							
PVE2_HPV16	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	312-342							
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	313-340								
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-186								
PVE2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	159-193								
PVE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	304-331								

PCGENE	107s178s6	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVE2_HPV35	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	158-192	327-354							
PVE2_HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	7-34	323-357							
PVE2_HPV47	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	17-51	148-175	276-303						
PVE2_HPV51	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	137-184								
PVE2_HPV57	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	166-193								
PVE2_HPV58	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	2-36	309-336							
PVE2_HPV5B	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	17-51								
PVE2_PAPVE	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	120-150								
PVE2_PCPV1	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	267-294	327-361							
PVE4_HPV05	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	202-229								
PVE4_HPV11	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	81-108								
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	66-93								
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	59-86								
PVE4_HPV31	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	75-102								
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	63-97								
PVE4_HPV5B	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	202-229								
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	30-60								
PVE5A_HPV6B	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	30-60								
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	30-60								
PVE5_HPV35	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	27-54								
PVE5_HPV5B	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	11-41								
PVE5_PCPV1	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	55-82								
PVE6_HPV18	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	75-102								
PVE6_HPV31	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	69-96								
PVE6_HPV39	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	71-102								
PVE6_HPV41	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	119-146								
PVE6_HPV45	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	75-102								
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	72-99								
PVE6_HPV6B	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	71-102								
PVE94_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	620-647								
PVEF_GVTN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS	411-438								
PVENV_DHVI1	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61)	318-366								
PVENV_EAV	PROBABLE ENVELOPE PROTEIN	EQUINE ARTERITIS VIRUS	120-147								
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR	THOGOTO VIRUS	313-347								
PVF03_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	71-110	185-212							
PVF03_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	71-110	185-212							
PVF05_VACCP	36 KD MAJOR MEMBRANE PRO PRECURSO	VACCINIA VIRUS (STRAIN L-IVP)	33-60								
PVF05_VACCV	36 KD MAJOR MEMBRANE PRO PRECURSO	VACCINIA VIRUS (STRAIN WR)	33-60								
PVF06_VARV	PROTEIN F6	VARIOLA VIRUS	10-44								
PVF11_VACCC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	274-321								
PVF11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	270-317								
PVF11_VARV	PROTEIN F11	VARIOLA VIRUS	274-321								
PVF12_VACCC	PROTEIN F12	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-37	113-140	554-581						
PVF12_VACCP	PROTEIN F12	VACCINIA VIRUS (STRAIN L-IVP)	10-37	113-140	554-581						
PVF12_VARV	PROTEIN F12	VARIOLA VIRUS	10-37	202-236	554-581						
PVF16_VACCC	PROTEIN F16	VACCINIA VIRUS (STRAIN COPENHAGEN)	35-62	152-179							
PVF16_VACCP	PROTEIN F16	VACCINIA VIRUS (STRAIN L-IVP)	35-62	152-179							
PVF16_VARV	PROTEIN F16	VARIOLA VIRUS	35-62	149-179							
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	146-173								
PVFUS_ORFNZ	10 KD FUSION PROTEIN	ORF VIRUS (STRAIN NZ2)	59-86								
PVFUS_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-64								
PVFUS_VACCV	KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	37-64								
PVG01_VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	225-252	301-335							
PVG01_VACCV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	164-191	240-274							
PVG01_VARV	PROTEIN G1	VARIOLA VIRUS	225-252	301-335							
PVG02_VACCV	ISATIN-B-TSC DEP PROTEIN	VACCINIA VIRUS (STRAIN WR)	96-123								
PVG02_VARV	ISATIN-B-TSC DEP PROTEIN	VARIOLA VIRUS	96-123								

PCGENE	107:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVG03_HSVEB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	146-176								
PVG03_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVG05_VACCC	PROTEIN G5	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75	131-161	225-289	355-389					
PVG05_VARV	PROTEIN G5	VARIOLA VIRUS	48-75	124-161	255-289	355-389					
PVG07_HSV11	HYPOTH GENE 7 MEMB PRO	ICTALURID HERPESVIRUS 1	71-98								
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	308-338								
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	271-301								
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	308-338								
PVG12_SPV1R	GENE 12 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	11-45								
PVG17_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	177-204								
PVG18_HSV11	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1	174-208								
PVG1_SPV1R	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	260-287								
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS 4	287-314	383-410							
PVG22_HSV11	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	373-400	581-622	668-705	766-824					
PVG24_HSV11	HYPOTHETICAL GENE 24 PROTEIN	ICTALURID HERPESVIRUS 1	31-58								
PVG28_HSV11	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	253-290	497-528							
PVG2R_AMEPV	HYPOTHETICAL G2R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	33-64	91-118							
PVG2_SPV1R	GENE 2 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	285-326								
PVG2_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4	146-173	175-205	262-310						
PVG34_HSV11	HYPOTHETICAL GENE 34 PROTEIN	ICTALURID HERPESVIRUS 1	95-122								
PVG37_HSV11	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	442-469								
PVG39_HSV11	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	651-678	1088-1115							
PVG3L_AMEPV	HYPOTHETICAL G3L PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	2-29								
PVG3_SPV1R	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	15-49								
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4	18-52	87-148							
PVG45_HSV5A	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	138-165								
PVG46_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	142-169	346-373	897-924	973-1007					
PVG48_HSV5A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-394								
PVG4R_AMEPV	G4R PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	4-31								
PVG4_SPV1R	GENE 4 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	116-146								
PVG51_HSV11	HYPOTH GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	34-61	87-114							
PVG52_HSV5A	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	47-74								
PVG56_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	582-609								
PVG5_SPV1R	GENE 5 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	65-92								
PVG5_SPV4	GENE 5 PROTEIN	SPIROPLASMA VIRUS 4	56-83								
PVG63_HSV11	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	550-584								
PVG64_HSV11	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	477-504								
PVG65_HSV11	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	1213-1254								
PVG66_HSV11	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1	362-406								
PVG67_HSV11	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	1342-1369								
PVG68_HSV11	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1	261-288								
PVG72_HSV11	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	447-481								
PVG73_HSV11	HYPOTHETICAL GENE 73 PROTEIN	ICTALURID HERPESVIRUS 1	388-422								
PVG76_HSV11	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1	200-227								
PVG7_SPV4	GENE 7 PROTEIN	SPIROPLASMA VIRUS 4	14-44								
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	1230-1260	2408-2435							
PVGL2_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	399-426		1022-1084	1278-1305					
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	399-426	642-676	1022-1084	1278-1305					
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	770-797	809-875	1056-1112						
PVGL2_CVM4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	643-684	1030-1092							
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	36-63	591-632	978-1040						
PVGL2_CVMJC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	643-684	1030-1092							
PVGL2_CVMJH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	502-543	889-951							

PCGENE	107a178a4	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGL3_CVPFS	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772	69-110	692-733	1072-1145	1353-1389					
PVGL3_CVPMI	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN MILL	69-110	692-733	1069-1145	1353-1389					
PVGL3_CVPPR	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR46	73-107	690-731	1067-1143	1351-1387					
PVGL3_CVPPU	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PURD	69-107	690-731	1067-1143	1351-1387					
PVGL3_CVPRI	E3 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH ISOLAT	468-509	845-921	1129-1165						
PVGL3_CVPRM	E3 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	468-509	845-921	1129-1165						
PVGL3_CVPRT	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NEB7	69-107	690-731	1067-1143	1353-1387					
PVGL3_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-102								
PVGL3_FIPV	E3 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	189-233	454-481	709-736	1072-1148	1356-1392				
PVGL3_IBV6	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M42)	809-836	876-903	1057-1091						
PVGL3_IBVB	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	808-835	875-902	1056-1090						
PVGL3_IBVD2	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	809-836	876-903	1057-1091						
PVGL3_IBVK	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	808-835	875-902	1056-1090						
PVGL3_IBVM	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	808-835	875-902	1056-1090						
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	95-122	631-658							
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	25-88	397-424	440-467	851-878					
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	50-88	397-424	435-462	852-879					
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	427-454								
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	447-474								
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A)	443-470	934-961							
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	486-513	616-643							
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	443-470	934-961							
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	934-961							
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	933-960							
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-120	352-379							
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	381-408	441-475							
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510								
PVGLC_HSVIK	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151								
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	295-322								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	295-322								
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-148								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	38-65	154-202	216-243	442-469	486-531				
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-65	154-202	216-243	444-471	488-533				
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38-65	154-202	216-243	444-471	488-533				
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	252-293	340-367							
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	38-65	154-203	442-471	488-515					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	38-65	154-202	213-243	488-518					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	38-65	154-202	216-243	444-471	488-515				
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	38-65	154-202	213-243	442-471	488-518				
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAINS EDMONSTON AND HALLE)	228-262								
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	231-265								
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	228-262								
PVGLF_MUMP1	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	447-486							
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	447-486							
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	447-486							
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	151-178	426-511							
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	151-178	426-512							
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	151-178	426-512							
PVGLF_NDVH3	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	151-178	426-512							
PVGLF_NDVH4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	151-178	426-512							
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	151-178	426-512							
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	151-178	192-219	426-512						
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MOYADERA/51)	151-178	437-512							
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	151-178	433-512							
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	151-178	426-512							
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B/48)	151-178	426-512							

PCGENE	107z17814	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	151-178	426-512							
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	36-63	221-262	309-336						
PVGLF_PI1HC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	147-174	210-266							
PVGLF_PI2H	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	90-117	141-175	238-266	483-528					
PVGLF_PI2HG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	90-117	141-175	238-266	483-528					
PVGLF_PI2HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	90-117	141-175	238-266	483-528					
PVGLF_PI3B	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-182	207-241	459-497						
PVGLF_PI3H4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	115-182	207-241	457-497						
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	224-265	458-485							
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	224-265	458-506							
PVGLF_SEND5	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANT5)	122-149	211-245	480-507						
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	122-149	211-245	480-507						
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	122-149	211-245	480-507						
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	122-149	211-245	480-507						
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	122-149	211-245	480-507						
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	144-185	241-269	459-496						
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	137-171	417-444							
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	124-161	193-200	457-484						
PVGLO_BEFV	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-557								
PVGLO_BRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92-123								
PVGLO_HRSV1	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	63-93								
PVGLO_HRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD5857)	66-107								
PVGLO_HRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD6190)	243-273								
PVGLO_HRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 8/60)	66-93								
PVGLO_HSVE4	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	271-298								
PVGLO_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	383-410								
PVGLO_RABVT	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN STREET)	489-519								
PVGLO_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	472-499								
PVGLH_EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	549-576	619-648							
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-136	270-297							
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-135								
PVGLH_HSV6G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	62-89	360-403							
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	388-415								
PVGLI_HCMVA	IE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-111								
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	512-546	914-941	1128-1255						
PVGLM_BUNLJ	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	913-950								
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	340-374	504-535	682-709						
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	945-972								
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	73-100	693-720							
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	75-102								
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	75-102								
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	75-102								
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	628-655	1069-1101							
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	69-96								
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	72-110								
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	72-110								
PVGLM_SEOU8	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	513-540	693-720							
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	73-100	513-540	694-721						
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11)	73-100	513-540	694-721						
PVGLN_BEFV	NONSTRUCT GLYCOPRO GNS PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-564								
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	48-82	1145-1179	1184-1211	1505-1532					
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSO	JUNIN ARENAVIRUS	14-41								
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSO	LASSA VIRUS (STRAIN GA391)	86-113								
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSO	MOPEIA VIRUS	86-113	316-346							
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSO	PICHINDE ARENAVIRUS	334-375								
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS	109-136	315-350							
PVGLY_TACV5	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN V5)	303-338								

PCGENE	187:178:4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN V7)	302-337								
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSO	TACARIBE VIRUS (STRAIN TRVL 11598)	303-338								
PVGNM_CPSMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-221								
PVGP8_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-149								
PVGP_EBOV	STRUCTURAL GLYCOPROTEIN PRECURSO	EBOLA VIRUS	280-314								
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSO	MARBURG VIRUS (STRAIN MUSOKE)	559-589	619-646							
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSO	MARBURG VIRUS (STRAIN POPP)	559-589	619-646							
PVH0S_VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	132-166								
PVH0S_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	132-166								
PVH0S_VARV	PROTEIN H5	VARIOLA VIRUS	64-91	150-184							
PVHEL_LSV	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	130-160								
PVHRP_VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	241-275								
PVHRP_VACCV	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	241-275								
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	90-117	153-180							
VI01_VARV	PROTEIN I1	VARIOLA VIRUS	90-117	153-180							
VI03_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	160-190								
VI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	160-190								
VI03_VARV	PROTEIN I3	VARIOLA VIRUS	160-190								
VI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	290-317	548-575	593-632						
VI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	290-317	548-575	593-632						
VI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	290-317	548-575	593-632						
VIE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	261-288								
VIE2_NPVOP	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	355-385								
VIEN_NPVAC	IE-REG PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	217-325	343-400							
VIF_HV1RH	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	62-89								
VIF_SIVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	2-36								
VIMP_HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	147-174								
VIMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	80-107								
VINT_SSV1	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-100								
VJ01_VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56								
VJ01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56								
VJ01_VARV	PROTEIN J1	VARIOLA VIRUS	22-56								
VL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	331-383								
VL1_FPVL	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-65								
VL1_HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	354-392								
VL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	183-210								
VL1_HPV33	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	19-46								
VL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	345-372								
VL1_HPV51	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	19-46								
VL1_HPV58	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	45-72								
VL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	407-445								
VL2_HPV41	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	415-442								
VL3_REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING)	330-357								
VL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	330-357								
VL96_IRVI	L96 PROTEIN	TIPULA IRIDESCENT VIRUS	146-180	625-652							
PVM1_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU	REOVIRUS (TYPE 1 / STRAIN LANG)	290-317								
PVM21_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 3 / STRAIN DEARING)	625-662								
PVM22_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVM2_REOVJ	MAJOR VIRION STRUC PROTEIN MU-1/MU-	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	624-661								
PVM3_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-N	REOVIRUS (TYPE 3 / STRAIN DEARING)	159-186	343-370	456-483	631-690					
PVMA2_BRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	124-152								
PVMA2_HRSVA	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	124-151								
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	219-246								
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	219-246								
PVMAT_INCJJ	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JJ/50)	131-185								
PVMAT_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	247-274								
PVMAT_PIDHT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	96-123								

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMAT_PIJB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PVMAT_PIJH4	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	201-231								
PVMAT_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	323-353								
PVME1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	175-209								
PVME1_CVTKB	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	175-209								
PVME1_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	21-48	184-218							
PVME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-48	184-218							
PVME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE M42)	21-48	184-218							
PVME1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	184-218								
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	220-254	273-324							
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	29-56	220-254	273-324						
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BDC)	227-254	273-324							
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	220-254	273-324							
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	220-254	273-324							
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	220-254	273-324							
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	26-53	100-127							
PVMP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	4-31	78-118							
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328								
PVMT1_DHVI1	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/1313/61)	38-65	237-264							
PVMT9_MYXVL	M-T8 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	163-190								
PVMT9_MYXVL	MT-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	465-492								
PVN34_ROTPC	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	83-113								
PVNCN_PAVBO	PROBABLE NONCAPSID PROTEIN NP1	BOVINE PARVOVIRUS	149-176								
PVNCS_ADVG	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	86-148								
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 003)	14-41	279-339	487-517	585-612	780-817	821-848			
PVNCS_MUMIM	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVMI)	35-62	262-289							
PVNCS_MUMIV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	35-62	262-289							
PVNCS_PAVHB	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	236-270								
PVNCS_PAVHH	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	35-62								
PVNCS_PAVPN	NONCAPSID PROTEIN NS-1	PORCINE PARVOVIRUS (STRAIN NADL-2)	24-55	169-196	316-346						
PVNS1_EHDV1	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN ALBERTA	411-438								
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	171-198								
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-198								
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	171-198								
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	171-198								
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	168-195								
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	171-198								
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	171-198								
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	171-198								
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	171-198								
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	171-198								
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	171-198								
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	171-198								
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/1492-B/82)	171-198								
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	171-198								
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	171-198								
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	171-198								
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	171-198								
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	171-198								
PVNS2_IATKR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	87-114								
PVNS2_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40)	51-78								
PVNS2_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	51-78								
PVNS2_INCJJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	71-98								
PVNS3_CVPFS	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772	9-36								
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	9-36								
PVNS4_RSV	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	6-40								
PVNS7_CVCAE	NONSTRUCTURAL PROTEIN 7	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-45								

PGENE	(97)(7)(8)4	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FULLNAME	PROTEIN	VIRUS	1-42								
PVNS7_CVFEJ	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)									
PVNS7_CVPFS	NONSTRUCTURAL PROTEIN 7	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS772)	34-61								
PVNS7_CVPPU	NONSTRUCTURAL PROTEIN 7	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR1)	34-61								
PVNS7_CVPUA	NONSTRUCTURAL PROTEIN 7	PORCINE RESPIRATORY CORONAVIRUS	34-61								
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	8-42								
PVNSC_PIIHE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-1483)	41-75								
PVNSC_PIJIM	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-99								
PVNSW_INSV	NONSTRUCTURAL PROTEIN NS-W	UNPATIENTS NECROTIC SPOT VIRUS	262-296								
PVNST_BUNLC	NONSTRUCTURAL PROTEIN NS-S	BUNYAVIRUS LA CROSSE	57-84								
PVNST_TOSV	NONSTRUCTURAL PROTEIN NS-S	TOSCANA VIRUS	146-180								
PVNUC_EBOV	NUCLEOPROTEIN	EBOLA VIRUS	331-369								
PVNUC_IAANA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PINTAIL/65/76)	378-405								
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	378-405								
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	378-405								
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	378-405								
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	378-405								
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	378-405								
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	378-405								
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/74/80)	378-405								
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	378-405								
PVNUC_IADC2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAK/1/56)	378-405								
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/)	378-405								
PVNUC_IADE2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	378-405								
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/77/)	378-405								
PVNUC_IADMG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	378-405								
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	378-405								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	378-405								
PVNUC_IADU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	378-405								
PVNUC_IAENS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1955)	378-405								
PVNUC_IAFON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	378-405								
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	378-405								
PVNUC_IAFPB	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTCH/27)	378-405								
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	378-405								
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	378-405								
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	378-405								
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/10/77)	378-405								
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/11824/78)	378-405								
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/11/79)	378-405								
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/2/78)	378-405								
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	378-405								
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/94/80)	378-405								
PVNUC_IAHRC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/40)	378-405								
PVNUC_IAIR1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/ILLINOIS/1/79)	378-405								
PVNUC_IAIR2D	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	378-405								
PVNUC_IAIR4J	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JAPAN/1/63)	378-405								
PVNUC_IAIR01	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	378-405								
PVNUC_IAIR02	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	378-405								
PVNUC_IAIRPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	378-405								
PVNUC_IAIRTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/86)	378-405								
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/15/79)	378-405								
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	378-405								
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	378-405								
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	378-405								
PVNUC_IAMDN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	378-405								
PVNUC_IANEJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/8/76)	378-405								
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	378-405								
PVNUC_IAOHO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/81)	378-405								

PCGENR	1087x1784	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	378-405								
PVNUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	378-405								
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	378-405								
PVNUC_IASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	378-405								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	378-405								
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	378-405								
PVNUC_IATE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	378-405								
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	378-405								
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	378-405								
PVNUC_IATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	378-405								
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/73)	378-405								
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	378-405								
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	378-405								
PVNUC_IAUSS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	378-405								
PVNUC_IAVI6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	378-405								
PVNUC_IAWHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/328/84)	378-405								
PVNUC_IAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/19/76)	378-405								
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	378-405								
PVNUC_IAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WISCONSIN/3523/88)	378-405								
PVNUC_IAZ39	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/37)	378-405								
PVNUC_IAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	378-405								
PVNUC_IAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	378-405								
PVNUC_IAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	378-405								
PVNUC_IAZGE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	378-405								
PVNUC_IAZH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	378-405								
PVNUC_IAZH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/126/82)	378-405								
PVNUC_IAZH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/127/82)	378-405								
PVNUC_IAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	378-405								
PVNUC_IAZI2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	378-405								
PVNUC_IAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	378-405								
PVNUC_IAZJ1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/437/76)	378-405								
PVNUC_IAZJ2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/2/79)	378-405								
PVNUC_IAZJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/141/81)	378-405								
PVNUC_IAZJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/839/89)	378-405								
PVNUC_IAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAMESBURG/42)	378-405								
PVNUC_IAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	378-405								
PVNUC_IAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	378-405								
PVNUC_IAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/35)	378-405								
PVNUC_IAZON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	378-405								
PVNUC_IAZTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	378-405								
PVNUC_IAZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	378-405								
PVNUC_IAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	378-405								
PVNUC_INCCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	99-126	416-443	451-478						
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	366-407								
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	366-407								
PV001_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37	109-138	581-608						
PV001_VARV	PROTEIN O1	VARIOLA VIRUS	7-37	109-138	581-608						
PVOR1_FXMV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	1023-1050								
PVOR1_NMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS	996-1023	1527-1561							
PVOR1_PMV	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS	948-978	1481-1532							
PVOR1_PVMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	597-627								
PVOR1_PVX	165 KD PROTEIN	POTATO VIRUS X	698-725	1017-1044							
PVOR1_PVXXJ	165 KD PROTEIN	POTATO VIRUS X (STRAIN XJ)	698-725	1017-1044							
PVOR1_SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	312-342	691-721							
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	7-41								
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	7-48								
PVP10_NPVSE	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	6-33	37-64							

PCGENE	107s178x4	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP10_RGDV	NONSTRUCTURAL PROTEIN PNS10	RICE GALL DWARF VIRUS	205-252								
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS	153-181	227-254							
PVP11_RDV	NONSTRUCTURAL PROTEIN PNS11	RICE DWARF VIRUS	53-80								
PVP12_WTV	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS	81-108								
PVP18_WTVNJ	NONSTRUCTURAL PROTEIN PNS12	WOUND TUMOR VIRUS (STRAIN NJ)	81-108								
PVP19_AMCV	CORE PROTEIN P19	ARTICHOKE MOTTLED CRINKLE VIRUS	73-100								
PVP19_TBSVC	CORE PROTEIN P19	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	73-100								
PVP23_HSVSA	PROBABLE CAPSID PROTEIN VP23	HERPESVIRUS SAIMIRI (STRAIN 11)	2-29								
PVP26_HSVEB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	36-63								
PVP26_HSVSA	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	48-75								
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	277-304	410-437	632-662	907-934					
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	815-846								
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	898-925								
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-146								
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	92-103	415-451							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	39-94	523-553							
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	39-94	524-554							
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	70-101	533-567							
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	52-99	128-136	518-545	705-746					
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	36-96								
PVP30_ASFE7	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75)	39-75								
PVP32_ASFB7	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	39-75								
PVP35_EBOV	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	83-119								
PVP35_MABVM	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN MUSOKE)	80-107	231-258							
PVP35_MABVP	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN POPP)	80-107	231-258							
PVP35_NPVAC	EARLY 35 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	270-297								
PVP35_NPVBM	EARLY 35 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	68-102								
PVP35_VACCV	IMMUNODOM ENV PRO P35	VACCINIA VIRUS (STRAIN WR)	178-205								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	134-161	264-291							
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	263-290								
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	132-159								
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-252								
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-252								
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	214-252								
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	209-243	798-832							
PVP3_EHDV2	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AUSTRAL	798-832								
PVP3_GFLV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS	99-133								
PVP3_ROTPC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	39-66	329-384							
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	26-67	350-377	451-497	619-692					
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	440-470								
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	205-232	344-372							
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	515-549								
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	174-208	495-522							
PVP41_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	589-619							
PVP42_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	584-622							
PVP4A_VACCC	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75								
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	48-75								
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	48-75								
PVP4B_FOWPV	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS	80-110								
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37								
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	7-37								
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	7-37								
PVP4_BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	34-61	576-603							
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	34-61	576-603							
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	34-61	576-603							
PVP4_BTV2A	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	552-622								
PVP4_NCDV	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	595-629								

PCGENE	107s17814	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP4_ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	8-35	584-622							
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	595-629								
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	112-146	235-269	552-629						
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	5-32								
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	8-35	572-628							
PVP4_ROTH1	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	8-35	279-306	565-621						
PVP4_ROTH5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	112-139	584-629						
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	279-306	565-621						
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	8-35	279-306	565-621						
PVP4_ROTHU	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	8-35	111-138							
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	8-35	77-104	279-306	577-621					
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	8-35	279-306	565-621						
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	8-35	572-610							
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13	8-35	573-628							
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	8-35	577-621							
PVP4_ROTHR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	8-38	105-135	235-262						
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	8-35	572-627							
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	8-35	279-306	590-617						
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	8-35	577-621							
PVP4_ROTP5	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	112-146	584-625							
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	5-33	115-161	293-320						
PVP4_ROTPO	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	8-35	572-628							
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	8-35	112-146	584-625						
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	8-38	584-622							
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	8-35	589-619							
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	8-35	130-157	584-622						
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	28-62								
PVP5_AHSV4	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	113-183	191-218							
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	53-80	99-126							
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	53-80	92-126							
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	53-80								
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	53-80	89-126							
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	53-80	92-126	148-182						
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	53-80	89-126							
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	31-80	191-218	399-426						
PVP5_WTV	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS	648-675								
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	161-193								
PVP61_MRDV	PROB NONSTRUCT 41.0 KD PRO	MAIZE ROUGH DWARF VIRUS	153-202								
PVP61_NPVAC	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	36-63								
PVP62_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	157-189								
PVP64_NPVOP	MAJOR ENV GLYCOPRO PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	45-72								
PVP67_NPVAC	MAJOR ENV GLYCOPRO PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-81								
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	157-189								
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	157-189								
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	157-189								
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	161-193								
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	133-172								
PVP6_RDV	STRUCTURAL PROTEIN P6	RICE DWARF VIRUS	10-37	354-381							
PVP74_NPVAC	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	413-440								
PVP75_HSV5A	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	181-208	929-977							
PVP79_NPVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-78	370-397							
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	16-43								
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	458-485								
PVP80_NPVAC	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	101-142	240-298							
PVP87_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	132-159								
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	105-132								
PVP8_FOWPV	STRUCTURAL PROTEIN VP8 PRECURSOR	FOWLPOX VIRUS	211-238								

PCGENE	107x178x4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	29-56	112-143							
PVP9_RDV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS	197-224								
PVP9_WTV	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS	22-49								
PVP9_WTVNJ	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ)	22-49								
PVPHE_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	196-223								
PVPHE_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	127-186	238-265							
PVPRT_ADEM1	ENDOPROTEASE	MOUSE ADENOVIRUS TYPE 1	167-194								
PVPU_HV1A2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	3-31								
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB10 AND IIXB3 ISOLATES)	5-48								
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	21-48								
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-49								
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	5-48								
PVPU_HV1C4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-30								
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	6-33								
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIXD2 ISOLATE)	5-48								
PVPU_HV1J3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	2-29								
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	22-49								
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	5-32								
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33								
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	5-48								
PVPU_HV1S1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	22-49								
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	51-78								
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	64-94								
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS	1051-1078								
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-43								
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV)	114-144								
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	28-55								
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS	9-44								
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-44								
PVS07_ROTBJ	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	2-29								
PVS07_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	91-146	199-236							
PVS07_ROTPS	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	91-146	202-236							
PVS07_ROTSI	NONSTRUCTURAL PROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	91-146	199-236							
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NS2/VP9	BOVINE ROTAVIRUS (STRAIN UK)	164-201								
PVS08_ROTSI	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	164-201	217-251							
PVS09_ROTB4	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	2-29								
PVS09_ROTBS	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A5)	2-29								
PVS09_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN UK)	2-29								
PVS09_ROTGA	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN ADRV)	210-237								
PVS09_ROTH4	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-29								
PVS09_ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	2-29								
PVS09_ROTHB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN B37)	2-29								
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	2-29								
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	2-29								
PVS09_ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	2-29								
PVS09_ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	2-29								
PVS09_ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	2-29								
PVS09_ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	2-29								
PVS09_ROTHW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-29								
PVS09_ROTP2	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT/76)	2-29								
PVS09_ROTP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	2-29								
PVS09_ROTSI	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	2-29								
PVS10_ROTBS	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	125-152								
PVS10_ROTSI	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	113-140								
PVS11_ROTBU	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	13-40	114-145							
PVS11_ROTBV	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (STRAIN VMRI)	13-40	114-145							
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRUS)	31-60								

PCGENE	107a178a4	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVS11_ROTHS	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	13-40	111-145							
PVS11_ROTHD	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	13-40	111-145							
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145								
PVS11_ROTRA	MINOR OUTER CAPSID PROTEIN	RABBIT ROTAVIRUS (STRAIN ALABAMA)	118-145								
PVS11_ROTSI	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-146								
PVSH_MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS	9-46								
PVSH_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	12-41								
PVSH_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	9-41								
PVSH_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	9-46								
PVSH_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	9-46								
PVSH_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	9-46								
PVSH_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	9-46								
PVSH_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	12-41								
PVSH_MUMPR	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN RW)	9-41								
PVSH_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	12-41								
PVS11_REOVD	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	26-63	71-122	127-168	222-259					
PVS11_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	4-104	130-193							
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	4-52	75-104	112-160						
PVS12_REOVD	SIGMA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	350-384								
PVS13_REOVJ	SIGMA 3 PROTEIN	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	289-316								
PVS1S_REOVD	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	90-117								
PVS1S_REOVL	SIGMA 1-S PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	50-77								
PVTJA_CAPVI	PROTEIN TJA	CAPRIPOXVIRUS (STRAIN INS-1)	124-158								
PVT5_SFVKA	PROTEIN T5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	250-277								
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	234-290								
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451								
PVTER_HSV6U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	176-203								
PVTER_HSVII	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	710-737								
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	394-421								
PVTPJ_TTVIV	VIRAL PROTEIN TPX	THERMOPROTEUS TENAX VIRUS 1 (STRAIN VTJ)	169-196								
PVTPX_TTVI	VIRAL PROTEIN TPX	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	169-196								
PVV_PI4HA	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIDA)	4-38								
PY101_SSVI	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	25-65								
PY108_SSVI	HYPOTHETICAL 10.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-61								
PY119_SSVI	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	30-78								
PY11K_TYDVA	HYPOTHETICAL 11.2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	53-87								
PY13K_NPVAC	HYPOTH 13.1 KD IN 39 KD 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	85-112								
PY13K_SSVI	HYPOTHETICAL 13.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	59-86								
PY14K_SSVI	HYPOTHETICAL 13.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	5-39								
PY16K_NPVAC	HYPOTH 16 IN 39 KD PROTEIN 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	80-107								
PY16K_SSVI	HYPOTHETICAL 15.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	77-111								
PY17K_SSVI	HYPOTHETICAL 17.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	9-36	119-153							
PY18K_MSVN	HYPOTHETICAL 17.7 KD PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	34-61								
PY18K_MSVS	HYPOTHETICAL 17.2 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	34-61								
PY20K_SSVI	HYPOTHETICAL 20.4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	76-103								
PY28K_SSVI	HYPOTHETICAL 28.3 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	93-164								
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	118-148								
PY31K_SSVI	HYPOTHETICAL 31.3 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	24-97								
PY32K_SSVI	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	233-267								
PY38K_NPVAC	HYPOTHETICAL 37.7 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-184								
PY3_SOCMV	HYPOTHETICAL PROTEIN 3	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-149								
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	56-94								
PY85K_SSVI	HYPOTHETICAL 85.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-121	546-573	658-700						
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	13-40								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	74-108	152-179	184-218						
PYB05_FOWPM	HYPOTHETICAL BAMHI-ORF5 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	62-89								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	162-197	214-241							

PCGENE	107a178a4	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	11-38								
PYB13_FOWPM	HYPOTHETICAL BAMHI-ORF13 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	128-167								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	87-116								
PYDH1_HSV87	HYPOTH 24.1 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	161-188								
PYDH1_HSV8C	HYPOTH 28.7 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	52-82								
PYDH4_HSV8C	HYPOTH 9.9 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-83								
PYF26_FOWPI	HYPOTHETICAL 23.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	8-35								
PYF30_FOWPI	HYPOTHETICAL 30.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	170-204								
PYH22_VACCV	HYPOTH 21.7 KD HINDIII-C PRO	VACCINIA VIRUS (STRAIN WR)	37-64	95-126	144-171						
PYHRJ_VACCV	HYPOTH HOST RANGE 27.4 KD PRO	VACCINIA VIRUS (STRAIN WR)	31-58	179-206							
PYKR2_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-121								
PYKR4_EBV	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PYL15_ADE41	HYPOTH 12.4 KD IN 33 KD REGION	HUMAN ADENOVIRUS TYPE 41	47-86								
PYLR3_EBV	HYPOTHETICAL BLRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	27-54								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	94-143								
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	35-76								
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	64-94								
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	65-95								
PYOR3_ADEGI	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS)	92-119								
PYORA_TTV1	HYPOTHETICAL 8.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	23-57								
PYORL_TTV1	HYPOTHETICAL 26.8 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	15-42								
PYORQ_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-31								
PYORW_TTV1	HYPOTHETICAL 12.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	4-40								
PYP12_RTBV	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	44-71								
PYP12_RTBVP	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	44-71								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	59-101	106-157							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	51-101	106-157							
PYP46_RTBV	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	58-107	197-231							
PYP46_RTBVP	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	58-107	197-231							
PYP63_NPVAC	HYPOTH PRO P6.5 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-71								
PYP6J_NPVOP	HYPOTH 40.0 KD IN P6.5 5'REGION	OROYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	325-352								
PYPOH_NPVAC	HYPOTH 23.6 KD IN POLYHEDRIN 5'REGIO	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	116-153								
PYPOL_IPNVN	HYPOTHETICAL 17.0 KD PROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	5-32								
PYQ3_AMEPV	HYPOTHETICAL PROTEIN IN TK 3'REGION	AMSACTA MOOREI ENTOMOPOXVIRUS	8-57	59-96	156-183						
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	208-235								
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	223-257	268-299							
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	141-168								
PYRF4_HSV6G	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	404-441								
PYRP2_IRV6	REPETITIVE PROTEIN ORF2	CHILO IRIDESCENT VIRUS	10-45								
PYVAG_VACCC	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-34								
PYVAH_VACCC	HYPOTHETICAL 14.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-112								
PYVDB_VACCC	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-77								
PYVDB_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	46-77								
PYVDH_VACCV	HYPOTHETICAL 7.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	20-50								
PYVGB_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-44								
PYZL3_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	152-179								

TABLE VII

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

(PREFERRED VIRAL SEQUENCES)

PCGUNF	(All Viruses (no bacteriophages))								
FILENAME	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PPOL_MLVAR	AKR MURINE LEUKEMIA VIRUS	493:480							
PENV_MLVAV	AKV MURINE LEUKEMIA VIRUS	517:544							
PPOL_MLVAV	AKV MURINE LEUKEMIA VIRUS	601:822							
PMYC_AVD41	AVIAN MYELOCYTOMATOSIS VIRUS CMII	333:364	395:402						
PMYC_AVD40	AVIAN MYELOCYTOMATOSIS VIRUS MH1	333:367	396:403						
PMYC_AVD4C	AVIAN MYELOCYTOMATOSIS VIRUS MC29	333:367	396:403						
VL1_FPVL	PROBABLE L1 PROTEIN	18:45							
PVGLB_HSV81	GLYCOPROTEIN I PRECURSOR	437:454							
PUR2_HSV81	RIBONUCLEOTIDE REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 14)	90:111						
PVGLB_HSV81	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN BMV)	447:474						
PENV_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 1A6)	11:44	544:601	631:695				
PENV_BIV21	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 121)	17:44	573:632	660:724				
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AGERICAN ISOLATE FLK)	104:111						
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	104:111						
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	104:111						
PENV_BLVB1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB115)	111:111						
PENV_BLVB3	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB19)	104:111						
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-J)	104:111						
PHEMA_PIID	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66:91						
PRDP_PIIB	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	91:91	133:202	185:214				
PVGLC_PIIB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115:182	207:241	239:407				
PVMAT_PIIB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	101:111						
PRDP_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1(1961))	99:133						
PVGLC_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1(1961))	68:91	136:203	176:247	402:469	486:511		
PVMAT_BRSVA	MATRIX GLYCOPROTEIN M1	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1(1961))	134:152						
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1(1961))	216:246						
PVGLC_BRSVC	MAJOR SURFACE GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38:45	136:203	176:247	404:471	488:513		
PVGLO_BRSVC	FUSION GLYCOPROTEIN O	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92:133						
PVGLI_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38:45	134:201	174:245	444:471	488:513		
PENV_BLVCB	ENV POLYPROTEIN	CAS-BIR MURINE LEUKEMIA VIRUS	110:139						
PENV_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	100:107	133:189	176:264	626:654			
PVPU_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	11:38						
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ1)	242:269	626:685					
PVE1_CRVPK	PROBABLE E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMA VIRUS (STRAIN KANSAS)	1:36						
VL1_CRVPK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMA VIRUS (STRAIN KANSAS)	131:181						
PPOLG_DEN13	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN TONGA/PUO 337/1974)	1818:1865	1890:1933	2008:2046				
PPOLG_DEN24	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	1344:1391	1838:1881	1901:1933	1982:2019	1111:1147		
PPOLG_DEN31	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN 16681-PDK53)	1344:1391	1838:1881	1901:1933	1982:2019	1117:1147		
PPOLG_DEN4J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4 (STRAIN JAMAICA)	1344:1391	1838:1881	1901:1933	1982:2019	1117:1147		
PPOLG_DEN4P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4 (STRAIN PR159-S1)	1344:1391	1838:1881	1901:1933	1982:2019	1116:1144	1141:1170	
PPOLG_DEN41	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4 (STRAIN TONGA 1974)	1134:1181	1648:1691		1792:1829			
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	1337:1384	1742:1769	1837:1884	2004:2041	2006:2014	1145:1173	
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	2005:2050	2917:2951	2957:3011	3142:3180			
PPOL_IPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN STRANGHAI DUCK ISOLATE 53)	5:39						
PPOL_IPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5:39						
PPOL_IPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE STRANGHAI DUCK ISOLATE 53)	5:39	104:131					
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145:192	1215:1243	1346:1371	1816:1900			
PVCA_EBV	VIRION PROTEIN BDLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115:142	1113:1140	1142:1169				
PVCA_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	117:124						
PVGLI_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68:102						
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	95:122	631:658					
PVGLH_EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104:134	619:648					
PVGP1_EBV	PROBABLE MEMBRANE ANTIGEN GP14	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104:140						

PCGENE	10:21:17:26	All Viruses (no bacteriophage)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
HP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	408:476							
PVTE_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	334:396							
PYR1_EBV	HYPOTHETICAL 81KD PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90:181							
PYR4_EBV	HYPOTHETICAL 84KD PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19:31							
PYL1_EBV	HYPOTHETICAL 81KD PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	17:34							
PYL2_EBV	HYPOTHETICAL 82KD PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	153:176							
PBLF1_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	197:220							
PDM1_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	973:1064	1041:1063						
FEA1_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	15:43							
PLM1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	166:171							
PLM1_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	194:321							
PLM1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN CAO)	148:173							
PLM1_EBVA	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN AG1)	148:173							
PUL1_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN UL1	EQUINE HERPESVIRUS TYPE 1	145:171							
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124:151							
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS11A)	403:476	934:961						
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	403:476	934:961						
PATI_HSVEB	ALPHA TRANS-IND FACTOR 11 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	299:321							
PATI_HSVEB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	153:186							
PHEL_HSVEB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	184:211	221:244						
PDR1_HSVEB	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75:102							
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	239:314	166:193	1701:1733					
PUL36_HSVEB	VIRION GENE 54 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640:667							
PUL11_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	207:286							
PUL11_HSVEB	GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44:71							
PUL17_HSVEB	GENE 33 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	115:149	991:1014						
PUL31_HSVEB	DNA REPLICATION PROTEIN UL33	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	193:220	901:930						
PVGG_HSVEB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	146:176							
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	403:476	934:961						
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	111:136							
VDP_HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	131:156							
PVT4_HSVEB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	18:43							
PVGG_HSVEK	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146:176							
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	403:476	934:960						
CELF_HSVEB	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and RacA)	112:139							
PUL1_HSVE4	91KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	190:217							
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	406:433	616:643						
PVGLG_HSVE4	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	331:358							
PDUT_HSVE4	DEOXYUS-TRIPHOSPHOHYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90:117							
PVE1_PAPVE	PROBABLE E1 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	108:136							
PENV_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	610:680	727:749						
POL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	640:673							
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	619:666	720:747						
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640:693	731:758						
PENV_FLVCG	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CTE-4)	599:538							
PMTC_FLVT1	MTC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	397:420							
PMTC_FLV	MTC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	193:420							
PENV_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	498:519							
PENV_FLV1A	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	510:539	720:747						
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	457:486	731:758						
PENV_MLV71	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	533:557							
PMTC_MLV71	MTC TRANSFORMING PROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	533:561							
PENV_MLV57	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	533:561							
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	114:201	737:764						
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	137:164	147:174						
POL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	136:441	147:174						
PDPOL_10P3G5	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	333:363	676:701						

PCGENE	All Viruses (no bacteriophages)										
ID:1:1204	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
FILENAME	PROTEIN										
POLG_HPAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	1031-1317	1031-1048	1117-1149	1434-1481					
POLG_HPAV3	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	1031-1317	1031-1048	1117-1149	1434-1481					
POLG_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 41C)	1031-1317	1031-1048	1117-1149	1434-1481					
POLG_HPAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CB126)	1031-1317								
POLG_HPAVG	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GA76)	1032-1316								
POLG_HPAVH	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	1031-1317	1031-1048	1101-1149						
POLG_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	1031-1317	1031-1048	1101-1149						
POLG_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	1031-1317	1031-1048	1101-1149						
POL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINOPFDW184)	438-683								
POL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	441-678								
POLG_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	1031-1319								
POLG_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	1031-1319	1041-1071							
POLG_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	1031-1319	1041-1071							
POLG_HCVJ4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J4)	1174-401	1048-1116							
POLG_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	1049-1316	1049-1116							
POLG_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	1031-1319	1041-1072							
POLG_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JA)	1178-401	1067-1139	1045-1072						
POLG_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN)	1031-1319	1041-1072							
PAAN1_IDVD3	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE ANTARCTICA)	106-111								
PAAN1_IDVD1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICA)	106-111	106-111							
PAAN1_IDVD2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICA)	16-43	106-111							
PAAN1_IDVW0	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICA)	106-111								
PAAN1_IDVWT	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICA)	106-111								
PAAN1_IDVW1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICA)	106-111								
PPOLN_HEVBA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	119-316	144-316							
PPOLN_HEVBX	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	119-316	144-316							
PPOLN_HEVMA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	119-316	144-316							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	118-315	144-315							
POL_HPBH4	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39								
PVISA_IPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	194-338	-							
PEA1_HSV11	TRANSCRIPTIONAL REGULATOR (EA)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	240-335								
PEA0_HSV11	IMMEDIATE-EARLY PROTEIN 0	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	46-63								
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667-891	1031-1110							
PUL36_HSV11	VIRION PROTEIN UL36	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	1116-883								
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-165								
PUL33_HSV11	PROTEIN UL33	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	210-491	151-184							
PUL42_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	311-358								
PUL47_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	418-513								
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510								
PATU_HSV11	ALPHA TRANS-IND FACTOR 1B KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	168-315								
PUL07_HSV11	VIRION PROTEIN UL07	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	418-513								
PATU_HSV1F	ALPHA TRANS-IND FACTOR 1F KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	168-315								
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	468-510								
PVGLE_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-148								
PTEGU_HSV4G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	1032-1329	1238-1261	1457-1611	1962-1993	1098-1118	1661-1688	1884-1911		
PVGLH_HSV4G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	61-88	160-180							
PYTE1_HSV4G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	208-255								
PYTE2_HSV4G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	1233-1317	1268-1299							
PYTE3_HSV4G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	1141-1184	6							
PYTE4_HSV4G	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G)	404-441								
PYTE5_HSV4G	HYPOTHETICAL PROTEIN RF5	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1103)	61-108	189-216	648-715	785-813					
PUL37_HSV4U	HYPOTHETICAL PROTEIN UL	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1103)	116-341	239-268							
PUL39_HSV4U	HYPOTHETICAL PROTEIN UL	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1103)	11-100	185-214							
PVCAP_HSV4U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1103)	176-190	335-382							
PVTEA_HSV4U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1103)	176-203								
PTYS1_HSVAT	THYMIDYLATE SYNTHASE	HERPESVIRUS ATELES	116-163								

PCGENE	1671:1784	All Viruses (no bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA2	AREA6	AREA7	AREA8	AREA9
PDPOL_HSV8A	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN II)	625-652								
PDUT_HSV8A	DEOXYU 5'-TRIPHOSPH NUCLEOTIDOHYDROLASE	HERPESVIRUS SAIMIRI (STRAIN II)	179-215								
PHELI_HSV8A	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN II)	418-469								
PICI8_HSV8A	PROBABLE PROC & TRANSPORT PRO	HERPESVIRUS SAIMIRI (STRAIN II)	58-85	482-522							
PIE40_HSV8A	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	48-76								
PKITH_HSV8A	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN II)	340-386								
PRIR1_HSV8A	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN II)	326-358								
PTEGU_HSV8A	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	526-605	622-700	777-814	846-898	949-986	990-1017	1467-1497	2102-2135	
PTYSY_HSV8A	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN II)	120-147								
PUL06_HSV8A	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	15-42	302-358	368-402						
PUL33_HSV8A	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	34-61	204-230	362-389						
PUL36_HSV8A	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	208-235								
PUL37_HSV8A	GENE 65 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	31-65	685-737							
PUL52_HSV8A	PROB DNA REP GENE 36 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	130-157								
PUL53_HSV8A	HYPOTHETICAL GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	9-36								
PUL87_HSV8A	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	582-609								
PUL92_HSV8A	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	93-121								
PUNG_HSV8A	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN II)	135-176								
PVCAP_HSV8A	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	769-799								
PVG45_HSV8A	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	138-165								
PVG48_HSV8A	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	360-394								
PVG52_HSV8A	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	47-74								
PVGLH_HSV8A	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN II)	388-415								
VDMP_HSV8A	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	80-107								
PVP23_HSV8A	PROBABLE CAPSID PROTEIN VP23	HERPESVIRUS SAIMIRI (STRAIN II)	2-29								
PVP26_HSV8A	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN II)	68-95								
PVP40_HSV8A	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN II)	205-232	344-372							
PVP75_HSV8A	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN II)	181-208	929-957							
PDNB1_HSV8A	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN II)	333-368	512-539							
PCGH2_HSV8A	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN II)	127-154								
PYDH1_HSV8T	HYPOTH 34 1 KD IN DIFR 3'REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	161-188								
PYDH1_HSV8C	HYPOTH 38 7 KD IN DIFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	55-82								
PYDH1_HSV8C	HYPOTH 9 9 KD IN DIFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	55-81								
PENV_MLVHO	ENV POLYPROTEIN	HOMOLOV MURINE LEUKEMIA VIRUS	510-540								
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	753-780								
PIC18_HCMVA	PROB PROC & TRANSPORT PRO UL56	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	304-334								
PUR05_HCMVA	HYPOTHETICAL PROTEIN UL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	32-60								
PUR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-102								
PUR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	38-65								
PRIR1_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	622-649								
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1251-1281	2202-2239							
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47								
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PUL16_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-111								
PUL30_HCMVA	HYPOTH PRO UL30 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	167-194	254-284							
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	335-362								
PUL47_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	134-168	448-485	763-790	802-833					
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	159-186								
PUL59_HCMVA	HYPOTHETICAL PROTEIN UL59	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-101								
PUL70_HCMVA	PROB DNA REP PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-93								
PUL73_HCMVA	UL73 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-33								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-92								
PUL93_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-53	314-381							
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	37-71								
PULA4_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-31	443-477							
PUL89_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-58								

GENE	All Viruses (no herpesviruses)									
GENE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PUL0_HCMVA	HYPOTHETICAL PROTEIN UL10	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	90-124							
PUL09_HCMVA	HYPOTHETICAL PROTEIN UL09	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-47							
PUL11_HCMVA	HYPOTHETICAL PROTEIN UL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	171-208							
PUL12_HCMVA	MEMBRANE PROTEIN UL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	189-218							
PVGL0_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	35-88	397-424	440-467	511-538				
PVGL1_HCMVA	GLYCOPROTEIN M PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-116	170-197						
PVGL2_HCMVA	38 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	67-111							
PVTE3_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-491							
PDNB1_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-464							
PVMK_HCMVE	90 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	194-231							
PVGL0_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	90-88	397-424	433-460	511-538				
PVGL1_HCMVT	GLYCOPROTEIN M PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	106-115							
ENV_HV1A2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	510-593	706-835						
PGAG_HV1A2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	97-118							
PPOL_HV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	218-265	630-661						
PVPU_HV1A2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	1-30							
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OHIO AND HXB2 ISOLATES)	1-48							
PENV_HV1B1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	503-596	631-661	701-810					
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	220-317	617-673						
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	220-317	631-673						
PENV_HV1B8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	503-596	616-658	686-811					
PVPU_HV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	1-48							
PENV_HV1BN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAZIL ISOLATE)	507-596	631-661	701-810					
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAZIL ISOLATE)	1-48							
PENV_HV1BR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	508-599	616-668	686-811					
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	220-317	617-673						
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	1-48							
PENV_HV1C4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	507-596	557-606	631-661	701-811				
PVPU_HV1C4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	1-30							
PENV_HV1EL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	235-296	706-813	761-791	828-880				
PREF_HV1EL	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-119							
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	217-264	624-660						
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	1-33							
PENV_HV1H2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB/LAI ISOLATE)	503-596	631-661	701-810					
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB/LAI ISOLATE)	218-265	630-661	721-811					
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB/LAI ISOLATE)	1-48							
PENV_HV1H3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB) ISOLATE)	503-596	631-661	701-810					
PENV_HV1H3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIIB) ISOLATE)	536-537	536-685	642-694	801-839				
PGAG_HV1J3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (J3) ISOLATE)	91-118							
PVPU_HV1J3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (J3) ISOLATE)	1-29							
PENV_HV1JR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	536-583	633-635	686-811					
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	222-269	624-665						
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	12-49							
PENV_HV1MA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	503-595	633-707	794-824					
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	217-264	636-510	618-660					
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	1-32							
PENV_HV1RF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEA ISOLATE)	503-592	639-681	789-816					
PENV_HV1SF	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ONT ISOLATE)	503-590	587-591	631-644	791-810				
PGAG_HV1SF	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ONT ISOLATE)	97-118							
PPOL_HV1SF	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ONT ISOLATE)	221-268	631-664						
PENV_HV1HD	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	508-590	636-581	621-677	781-811				
PREF_HV1ND	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	81-119							
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	217-264	624-660						
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33							
PENV_HV1NY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-1 ISOLATE)	536-590							
PPOL_HV1NY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-1 ISOLATE)	218-265	633-661						
PENV_HV1OY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYT1 ISOLATE)	504-593	616-704	789-820					

PCGENE	(1)1-1154	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
POL_HV1O7	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	318-345	620-641							
ENV_HV1PV	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV2 ISOLATE)	343-394	617-813	791-818						
POL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV2 ISOLATE)	320-337	617-633							
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV2 ISOLATE)	1-48								
ENV_HV1RH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RMAT ISOLATE)	280-307	551-578	554-603	640-692	700-733				
POL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RMAT ISOLATE)	317-344	619-640							
VIF_HV1RH	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RMAT ISOLATE)	61-89								
PENV_HV1SC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SCT ISOLATE)	318-345	593-593	631-683						
PENV_HV1SI	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	315-343	536-565	622-674	782-809					
PVPU_HV1SI	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	23-49								
PENV_HV1SJ	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	341-389	617-619	787-815						
PENV_HV1UG	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UG274)	274-301	535-598	637-677	776-821					
POL_HV1UG	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN ISOLATE)	317-344	611-640	619-660						
PENV_HV1W1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	318-345	593-593	631-683	791-818					
PENV_HV1W2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	318-345	536-564	622-674	782-809					
PENV_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-246 ISOLATE)	344-361	611-601	614-658	791-818					
PENV_HV1Z2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	315-368	543-591	618-636	796-820					
POL_HV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	317-344	619-640							
PENV_HV1Z3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	315-341								
PENV_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	336-363	536-593	610-682	793-822					
PNEF_HV1Z6	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	66-124								
PENV_HV1ZH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOLATE)	345-393	627-668	791-819						
PENV_HV1BE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	341-391	533-591	631-683	631-697					
PGAG_HV2BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	88-113								
POL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-518								
PENV_HV2B	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	339-393	611-650	613-699						
PVIF_HV2CA	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1)	61-89								
PENV_HV2D1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1)	61-88	533-550	555-583	644-688					
PGAG_HV2D1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115								
POL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	489-508								
PENV_HV2G1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	490-568								
POL_HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	60-87								
PENV_HV2N2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	324-337	536-583	613-640	641-693					
PGAG_HV2N2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	61-88								
POL_HV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH1.2)	322-351	536-583	613-640	642-689					
PENV_HV2N2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH1.2)	88-113								
PGAG_HV2N2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH1.2)	491-518								
POL_HV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH1.2)	58-85	533-591	622-698						
PENV_HV2RO	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	412-561								
POL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	533-586	614-671							
PENV_HV2S1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	533-586								
POL_HV2S1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	491-563								
PENV_HV2S1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	412-476	537-554	558-586	648-691					
PGAG_HV2S1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	88-115								
POL_HV2S1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-582								
PENV_HV2S1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/IRP (C2))	417-476	537-554	559-586	648-687					
PVE4_HPV11	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	81-108								
PVE1A_HPV11	PROBABLE E1A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	30-60								
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	115-184	534-561							
PVE1_HPV16	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	113-582							
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	64-91								
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	60-87								
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	115-140								
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	59-86								
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	35-102								
PVE4_HPV31	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	111-110								
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	159-186								
PVE4_HPV33	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	107-135								
PVE1_HPV6A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6A	37-68								

PCGENE	IDENTITY	All Viruses (no bacteriophage)									
ID_NAME	PROTEIN	VIRUS									
PVE1_HPV1A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-193								
PVE1_HPV1B	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1B	31-101								
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	69-96								
PVE1_HPV16	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	180-207								
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	184-211								
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	19-46								
XL1_HPV31	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	330-393	127-334							
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	13-54								
PVE1_HPV35	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	107-130								
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	7-34	333-353							
PVE1_HPV39	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	31-107								
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	55-89								
PVE6_HPV41	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	61-87								
VL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	119-146								
VL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	365-392								
PVE1_HPV45	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	413-441								
PVE6_HPV45	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	23-59								
PVE1_HPV45	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	31-101								
PVE1_HPV45	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	146-173	148-173	176-203						
PVE1_HPV45	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	17-51								
PVE1_HPV51	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	107-139								
PVE1_HPV51	PROBABLE E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	137-164								
PVE1_HPV51	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	13-99								
PVE6_HPV51	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	19-46								
XL1_HPV51	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	21-48								
PVE1_HPV52	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 52	166-193								
PVE1_HPV52	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 52	3-34	109-136							
XL1_HPV52	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 52	45-72								
PVE1_HPV56	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 56	17-51								
PVE1_HPV58	PROBABLE E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	207-239								
PVE1_HPV58	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	11-41								
PVE6_HPV58	PROBABLE E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	10-40								
PVE1A_HPV6C	PROBABLE E1A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	10-40								
VL1_HPV6B	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6	334-392								
PVE6_HPV6B	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE MI/180	11-102								
PRAP_PIIVB	RNA POLYMERASE ALPHA SUBUNIT	INFLUENZA B VIRUS (STRAIN LEE)	84-111	234-261	373-410						
PNCAP_PIIHC	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN PR8)	137-404	411-441							
PRAP_PIIHC	RNA POLYMERASE ALPHA SUBUNIT	INFLUENZA A VIRUS (STRAIN PR8)	84-111	234-261	373-410						
PVGLI_PIIHC	FUSION GLYCOPROTEIN PRECURSOR	INFLUENZA A VIRUS (STRAIN PR8)	107-174	176-364							
PLIP_PIIHA	RNA POLYMERASE ALPHA SUBUNIT	INFLUENZA A VIRUS (STRAIN CH/60)	84-111	234-261	373-410						
PMSC_PIIHB	NONSTRUCTURAL PROTEIN C	INFLUENZA A VIRUS (STRAIN CH/60)	61-95								
PRAP_PIIHD	RNA POLYMERASE ALPHA SUBUNIT	INFLUENZA A VIRUS (STRAIN CL5/71)	84-111	232-259	373-410						
HEMA_PIIHW	HEMAGGLUTININ-NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN WASHINGTON/1/33)	19-116	166-193							
PNCAP_PIIHW	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN WASHINGTON/1/33)	137-404	444-468							
PRAP_PIIH	RNA POLYMERASE ALPHA SUBUNIT	INFLUENZA A VIRUS	107-174	176-364	411-438						
PVGLI_PIIH	FUSION GLYCOPROTEIN PRECURSOR	INFLUENZA A VIRUS (STRAIN GREER)	90-117	230-364	411-438						
PVGLI_PIIHO	FUSION GLYCOPROTEIN PRECURSOR	INFLUENZA A VIRUS (STRAIN TOKYO/3/67)	232-289	1364-1393	1401-1946						
PRAP_PIIHT	RNA POLYMERASE BETA SUBUNIT	INFLUENZA A VIRUS (STRAIN TOKYO/3/67)	232-289	1403-1431	1471-1721						
PRAP_PIIHA	RNA POLYMERASE ALPHA SUBUNIT	INFLUENZA A VIRUS (STRAIN TOSHIBA)	84-111	234-261	373-410						
PVGLI_PIIHT	FUSION GLYCOPROTEIN PRECURSOR	INFLUENZA A VIRUS (STRAIN TOSHIBA)	90-117	230-364	411-438						
PMAT_PIIHT	MATRIX PROTEIN	INFLUENZA A VIRUS (STRAIN TOSHIBA)	96-123								
HEMA_PIIHA	HEMAGGLUTININ-NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AUSTRALIA/1/77)	21-41								
PNCAP_PIIHA	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN NWS/33)	134-401								
HEMA_PIIH4	HEMAGGLUTININ-NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN NWS/33)	17-41								
PRAP_PIIH4	RNA POLYMERASE BETA SUBUNIT	INFLUENZA A VIRUS (STRAIN NWS/33)	137-164	178-193	403-430	1001-1123	1994-2016	2115-2142			
PRAP_PIIH4	RNA POLYMERASE BETA SUBUNIT	INFLUENZA A VIRUS (STRAIN NWS/33)	166-199								

PCGENE	(10p17)(p)(q)	All Viruses (no bacteriophages)										
ID# NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PVGLF_PIUHA	FUSION GLYCOPROTEIN PRECURSOR	(HUMAN PARAINFLUENZA 3) VIRUS (STRAIN WASH/47811)	119-188	207-241	437-497							
PVGLF_PIUHA	MATRIX PROTEIN	(HUMAN PARAINFLUENZA 3) VIRUS (STRAIN WASH/47811)	280-331									
PVNSC_PIUHA	NONSTRUCTURAL PROTEIN C	(HUMAN PARAINFLUENZA 3) VIRUS (STRAIN WASH/47811)	58-99									
PHEMA_PIUHV	(HEMAGGLUTININ-NEURAMINIDASE	(HUMAN PARAINFLUENZA 3) VIRUS (STRAIN TEX/10/77/61)	23-61									
PHEMA_PIUHT	(HEMAGGLUTININ-NEURAMINIDASE	(HUMAN PARAINFLUENZA 3) VIRUS (STRAIN TEX/19/79)	23-61									
PHEMA_PIUHU	(HEMAGGLUTININ-NEURAMINIDASE	(HUMAN PARAINFLUENZA 3) VIRUS (STRAIN TEX/10/82)	23-61									
PHEMA_PIUHX	(HEMAGGLUTININ-NEURAMINIDASE	(HUMAN PARAINFLUENZA 3) VIRUS (STRAIN WASH/15111/83)	23-61									
PHEMA_PIUHW	(HEMAGGLUTININ-NEURAMINIDASE	(HUMAN PARAINFLUENZA 3) VIRUS (STRAIN WASH/4441/79)	23-61									
PNUP_PIUHA	RNA POLYMERASE ALPHA SUBUNIT	(HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOS1108A)	4-38									
PVP_PIUHA	V PROTEIN	(HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOS1108A)	4-38									
PNUP_HSVSV	RNA POLYMERASE ALPHA SUBUNIT	(HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141									
PNCAP_HSVSA	NUCLEOCAPSID PROTEIN	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31									
PNUP_HSVSA	RNA POLYMERASE BETA SUBUNIT	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	210-237	447-494	788-813	(807-1034	(1116-1163	(1431-1478	(1776-1803	(2062-2089		
PNUP_HSVSA	RNA POLYMERASE ALPHA SUBUNIT	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1)	99-141	213-243	402-431	488-515						
PVGLF_HSVSA	FUSION GLYCOPROTEIN PRECURSOR	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1)	119-188	213-243	402-431	488-515						
PVMAJ_HSVSA	MATRIX GLYCOPROTEIN M2	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1)	124-151									
PVMAT_HSVSA	MATRIX PROTEIN	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1)	218-244									
PVGLG_HSVSA	MAJOR SURFACE GLYCOPROTEIN G	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN B1(S))	66-107									
PVGLG_HSVSB	MAJOR SURFACE GLYCOPROTEIN G	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN B1(S)90)	203-233									
PVGLF_HSVSA	FUSION GLYCOPROTEIN PRECURSOR	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN B1(S-2)	58-85	213-243	402-431	488-515						
PNUP_HSVSL	RNA POLYMERASE ALPHA SUBUNIT	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141									
PVGLF_HSVSL	FUSION GLYCOPROTEIN PRECURSOR	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	118-45	156-201	210-241	444-471	488-515					
PNCAP_HSVSL	NUCLEOCAPSID PROTEIN	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	4-31	74-108	113-141							
PNUP_HSVSI	RNA POLYMERASE ALPHA SUBUNIT	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 1(S))	99-141									
PVGLF_HSVSI	FUSION GLYCOPROTEIN PRECURSOR	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 1(S))	118-45	156-201	402-431	488-515						
PVGLG_HSVSI	MAJOR SURFACE GLYCOPROTEIN G	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 1(S))	65-93									
PVGLG_HSVSI	MAJOR SURFACE GLYCOPROTEIN G	(HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 9/60)	66-93									
PENV_MTLIC	ENV POLYPROTEIN	(HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	242-276									
PPOL_MTLIC	POL POLYPROTEIN	(HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	476-512									
PENV_MTLIM	ENV POLYPROTEIN	(HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	242-276									
PENV_MTLIA	ENV POLYPROTEIN	(HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	242-276									
PPOL_MTLIA	POL POLYPROTEIN	(HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	476-512									
PENV_MTLV2	ENV POLYPROTEIN	(HUMAN T-CELL LEUKEMIA VIRUS TYPE II	246-280									
DPOL_HSVSI	DNA POLYMERASE	(CYTALOID HERPESVIRUS 1	728-766	776-797								
PKIN_HSVSI	GENE 74 PROTEIN KINASE	(CYTALOID HERPESVIRUS 1	491-518									
PVG01_HSVSI	HYPOTH GENE 74 RNA PRO	(CYTALOID HERPESVIRUS 1	31-58									
PVG11_HSVSI	HYPOTHETICAL GENE 11 PROTEIN	(CYTALOID HERPESVIRUS 1	137-201									
PVG18_HSVSI	HYPOTHETICAL GENE 18 PROTEIN	(CYTALOID HERPESVIRUS 1	174-201									
PVG22_HSVSI	HYPOTHETICAL GENE 22 PROTEIN	(CYTALOID HERPESVIRUS 1	125-400	581-621	668-705	788-814						
PVG31_HSVSI	HYPOTHETICAL GENE 31 PROTEIN	(CYTALOID HERPESVIRUS 1	31-58									
PVG33_HSVSI	HYPOTHETICAL GENE 33 PROTEIN	(CYTALOID HERPESVIRUS 1	335-360	467-518								
PVG34_HSVSI	HYPOTHETICAL GENE 34 PROTEIN	(CYTALOID HERPESVIRUS 1	95-122									
PVG35_HSVSI	HYPOTHETICAL GENE 35 PROTEIN	(CYTALOID HERPESVIRUS 1	442-469									
PVG39_HSVSI	HYPOTHETICAL GENE 39 PROTEIN	(CYTALOID HERPESVIRUS 1	611-671	1018-1111								
PVG44_HSVSI	PROBABLE MAJOR GLYCOPROTEIN	(CYTALOID HERPESVIRUS 1	142-169	196-233	897-924	971-1007						
PVG51_HSVSI	HYPOTH GENE 51 PEPTIDASE PROTEIN	(CYTALOID HERPESVIRUS 1	14-41	87-114								
PVG54_HSVSI	HYPOTHETICAL GENE 54 PROTEIN	(CYTALOID HERPESVIRUS 1	582-609									
PVG63_HSVSI	HYPOTHETICAL GENE 63 PROTEIN	(CYTALOID HERPESVIRUS 1	356-384									
PVG64_HSVSI	HYPOTHETICAL GENE 64 PROTEIN	(CYTALOID HERPESVIRUS 1	477-504									
PVG65_HSVSB	HYPOTHETICAL GENE 65 PROTEIN	(CYTALOID HERPESVIRUS 1	1315-1338									
PVG66_HSVSB	HYPOTHETICAL GENE 66 PROTEIN	(CYTALOID HERPESVIRUS 1	1033-1060									
PVG67_HSVSI	HYPOTHETICAL GENE 67 PROTEIN	(CYTALOID HERPESVIRUS 1	1342-1369									
PVG68_HSVSI	HYPOTHETICAL GENE 68 PROTEIN	(CYTALOID HERPESVIRUS 1	1401-1428									
PVG72_HSVSI	HYPOTHETICAL GENE 72 PROTEIN	(CYTALOID HERPESVIRUS 1	417-431									
PVG73_HSVSI	HYPOTHETICAL GENE 73 PROTEIN	(CYTALOID HERPESVIRUS 1	388-421									
PVG76_HSVSI	HYPOTHETICAL GENE 76 PROTEIN	(CYTALOID HERPESVIRUS 1	206-233									
PVTER_HSVSI	PROBABLE DNA PACKAGING PROTEIN	(CYTALOID HERPESVIRUS 1	116-137									

GENE	ID	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
ID_NAME	PROTEIN	VIRUS	39-56	194-221	383-417					
PHEMA_IAN1W	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1/77)								
PHEMA_IAN1C	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICK/ITALY/)	387-419							
PVNS1_IAN1A	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	131-159							
PVNUC_IAN1A	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/MURMANSK/75/76)	378-403							
PVNUC_IAN1N	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/MURMANSK/75/76)	119-146							
PVNS1_IAN1N	RNA-DIRECTED RNA POL SUB PJ	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	111-139							
PVNUC_IAN1N	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	111-139							
PHEMA_IAN1N	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	378-403							
PHEMA_IAB1N	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BRANGKOK/1/79)	26-51	331-413						
PNRAM_IAB1A	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/760/77)	47-81							
PVNUC_IAB1A	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/1/78)	378-403							
PHEMA_IAB1D	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOK/AIDO/1/71)	111-411							
PRDP1_IAB1D	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOK/AIDO/1/71)	533-561							
PVNUC_IAB1D	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOK/AIDO/1/71)	378-403							
PVNUC_IAC1L	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	378-403							
PNRAM_IAC1O	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/1)	37-64							
PHEMA_IAC1O	HEMAGGLUTININ	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/1)	9-36							
PHEMA_IAC1A	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	101-451							
PHEMA_IAC1D	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ENGLAND/N/49)	111-141	434-538						
PVNS1_IAC1D	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ENGLAND/N/49)	131-198							
PVNUC_IAC1D	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ENGLAND/N/49)	378-403							
PVNS1_IAC1U	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/FAIP/24)	168-195							
PHEMA_IAC1F	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/83)	196-436							
PVNUC_IAC1F	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/83)	378-403							
PHEMA_IAC1Q	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/83)	196-436							
PHEMA_IAC1V	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	119-146	184-441						
PNRAM_IAC1H	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHIRE/1/83)	16-43	90-91						
PRDP1_IAC1S	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/CHIRE/1/83)	331-358							
PVNS1_IAC1G	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHIRE/1/83)	171-198							
PHEMA_IAD1A1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	101-431							
PNRAM_IAD1A1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	51-81							
PHEMA_IAD1A4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	16-56	418-478						
PHEMA_IAD1A3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	423-453	499-560						
PVNS1_IAD1A3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	131-198							
PHEMA_IAD1A1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	383-453							
PVNUC_IAD1U	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/76/80)	378-403							
PVNUC_IAD1E	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/79)	378-403							
PHEMA_IAD1C2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	111-431							
PVNUC_IAD1C2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	378-403							
PVNUC_IAD1E1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1)	378-403							
PHEMA_IAD1E1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/83)	81-51	402-453	506-533					
PVNUC_IAD1E2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/83)	378-403							
PNRAM_IAD1G	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/48)	21-48							
PHEMA_IAD1H1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/KAIDO/161/)	111-437							
PHEMA_IAD1H3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/KAIDO/1/77)	111-437							
PHEMA_IAD1H5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/KAIDO/77/80)	111-437							
PHEMA_IAD1H7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/KAIDO/77/)	111-437							
PHEMA_IAD1H8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/KAIDO/78)	111-437							
PHEMA_IAD1H9	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/KAIDO/80)	111-437							
PRDP1_IAD1H9	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN A/DUCK/KAIDO/80)	119-146							
PHEMA_IAD1H6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/KAIDO/83)	111-437							
PVNUC_IAD1K	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/KONG/77)	378-403							
PHEMA_IAB1R	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/LAND/1/83)	415-445							
PHEMA_IAB1A	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/LAVAL/1/79)	111-58							
PVNUC_IAD1A4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/LAVAL/1/79)	378-403							
PHEMA_IAD1A2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/74)	31-58							
PVNUC_IAD1A2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/546/74)	378-403							

GENE	ID	All Viruses (no bacteriophage)									
NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PHEMA_I4JH7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW YORK/1/76)	21-55								
PHEMA_I4JH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/1/76)	181-431								
PVNUC_I4JH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/1/76)	338-465								
PHEMA_I4JH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/68)	21-55								
PHEMA_I4JH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/63)	187-433								
PVNUC_I4JH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/63)	338-465								
PVNUC_I4JH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1/53)	338-465								
PHEMA_I4JH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1/71)	40-47	187-433							
PHEMA_I4HAL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1/80)	24-31								
PHEMA_I4JE3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGER/57)	186-433								
PHEMA_I4JE6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/84)	29-36	194-221	388-433						
PHEMA_I4JE6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CALIFORNIA/1/93)	29-36	194-221	388-433						
PNRAM_I4JE1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/CALIFORNIA/1/93)	29-36	194-221	388-433						
PHEMA_I4JE6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/84)	187-224	388-433							
PHEMA_I4JE6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/79)	29-36	194-221	388-433						
PVNUC_I4JH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/ILLINOIS/1/89)	186-433								
PNRAM_I4JE1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	338-465								
PHEMA_I4JE7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-48	194-400							
PHEMA_I4JE6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/7/86)	186-433								
PHEMA_I4JE6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/86)	186-433								
PHEMA_I4JE8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/79)	29-36	194-221	388-433						
P1JP3_I4JE8	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/79)	29-36	194-221	388-433						
PVNUC_I4JE8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/79)	119-146								
PHEMA_I4JH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	338-465								
PVNUC_I4JH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	186-433								
PHEMA_I4JH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	29-36	194-221	388-433						
PHEMA_I4JH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	186-433								
P1JP3_I4JH3	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	29-36	194-221	388-433						
PVNUC_I4JH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	186-433								
PHEMA_I4JH0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ROMANIA/80)	111-361	388-433							
PHEMA_I4JH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/94)	338-465								
PHEMA_I4JH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	186-433								
PHEMA_I4JH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/63)	186-433								
PHEMA_I4JH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	29-36	194-221	388-433						
PHEMA_I4JH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/94)	186-433								
P1JP3_I4JH5	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/94)	119-146								
PVNUC_I4JH5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/1/94)	338-465								
PHEMA_I4JH0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/1/)	338-465								
PHEMA_I4JH6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	186-433								
PVNS1_I4JH6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	171-198								
PVNUC_I4JH6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	338-465								
PVNS1_I4JH6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/GREAT WARTHEN/1/50)	171-198								
PVNUC_I4JH6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREAT WARTHEN/1/50)	338-465								
PVNUC_I4JH0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OWL/PLAGUE VIRUS/BOSNIA/DUTCH/71)	338-465								
PHEMA_I4JH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/OWL/PLAGUE VIRUS/ROSTOCK/34)	177-211	384-442							
P1JP3_I4JH4	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/OWL/PLAGUE VIRUS/ROSTOCK/34)	119-146								
PVNUC_I4JH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OWL/PLAGUE VIRUS/ROSTOCK/34)	338-465								
PNRAM_I4JH4	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/OWL/PLAGUE VIRUS/WEYBRIDGE)	10-48	197-224							
PHEMA_I4JH8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PRINCE EDWARD ISLAND/1/79)	338-465								
PVNUC_I4JH8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PRINCE EDWARD ISLAND/1/79)	338-465								
PHEMA_I4JH9	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/ARKANSAS/1/94)	338-465								
PVNUC_I4JH9	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/QUAIL/ARKANSAS/1/94)	338-465								
PHEMA_I4JH	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/MARYLAND/1/78)	338-465								
PVNUC_I4JH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/QUAIL/MARYLAND/1/78)	338-465								
PHEMA_I4JH	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/MARYLAND/70/71)	301-312								
P1JP3_I4JH	RNA-DIRECTED RNA POL SUB P3	INFLUENZA A VIRUS (STRAIN A/QUAIL/MARYLAND/70/71)	119-146								

FCGENE	1121178:4	All Viruses (no bacteriophages)									
FILERANK	PROTEIN	VIRUS	ORIG1	ORIG2	ORIG3	ORIG4	ORIG5	ORIG6	ORIG7	ORIG8	ORIG9
PYRUC_IAGUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULAMAYLAND/6/77)	338-405								
PYRUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULAMASSACHUSETTS/1/40)	338-405								
PYRUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULAMONGOLIA/866/79)	338-405								
PIEMA_IAHJA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AHABERN/1/68)	39-56								
PYRUC_IAIRC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AIICKOW/40)	338-405								
PYRUC_IAJH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AJHONG KONG/68)	338-405								
PYRUC_IAJH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AJHONG KONG/81)	338-405								
PIEMA_IAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AJAPAN/305/57)	166-331	433-478							
PIEMA_IAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AKIEV/3/79)	39-56								
PHRAM_IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AKIEV/3/79)	16-81								
PYRUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AKIEV/3/79)	338-405								
PBUP1_IAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN AKORT/A/57/60)	555-603								
PBUP1_IALEO	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN ALEON/A/57/58)	555-603								
PBUP1_IALEO	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN ALEON/A/57/58)	555-603								
PBUP1_IALE1	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN AZ/ENGRAD/1/61)	555-603								
PYNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN AZ/ENGRAD/1/61)	1-99								
PIEMA_IALEE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AZ/ENGRAD/1/61)	16-81								
PHRAM_IALEE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AZ/ENGRAD/1/61)	16-81								
PYRUC_IALEE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AZ/ENGRAD/1/61)	338-405								
PYNS1_IAMAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN AMALLARDALBERTA/88/76)	1-99								
PIEMA_IAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AMALLARDALBERTA/88/76)	39-56								
PYRUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMALLARDALBERTA/88/76)	338-405								
PIEMA_IAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AMALLARDALBERTA/88/76)	39-56								
PBUP1_IAMAN	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN AMALLARDNEW YORK/83/78)	555-603								
PYRUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMALLARDNEW YORK/83/78)	338-405								
PIEMA_IAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AMALLARDNEW YORK/83/78)	39-56								
PIEMA_IAMEI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AMEXHIBISH/101/77)	40-63	187-211							
PHRAM_IAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AMEXHIBISH/101/77)	16-81	187-211							
PIEMA_IAMES	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AMEXHIBISH/82)	40-63	187-211							
PIEMA_IAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AMINN/3/60)	39-56	187-211							
PYRUC_IAMON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMINN/SWEDEN/86)	338-405								
PYRUC_IAMOT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMEW JERSEY/76)	338-405								
PIEMA_IAN10	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN ANT/60/65)	39-56	433-478							
PBUP1_IAN10	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN ANT/60/65)	555-603								
PYRUC_IAN10	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ANT/60/65)	338-405								
PYRUC_IAOHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AOHIO/42)	338-405								
PHRAM_IAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN APARIS/674/57)	16-81								
PYRUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN APARIS/674/57)	338-405								
PIEMA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN APILOT WIALEA/JANE/2/82)	181-334								
PBUP1_IAPI0	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN APINTAILDUCK/ALBERTA/35/76)	555-603								
PYNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN APINTAILDUCK/ALBERTA/35/76)	1-99								
PIEMA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN APUERTO RICO/8/34)	39-56	433-478							
PHRAM_IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN APUERTO RICO/8/34)	16-81								
PBUP1_IAPUE	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN APUERTO RICO/8/34)	555-603								
PYRUC_IAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN APUERTO RICO/8/34)	338-405								
PIEMA_IAQU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AQUIP/7/70)	24-51								
PIEMA_IARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN ARUDDY TURNSTONE/NEW JERSEY/47/81)	181-431								
PBUP1_IARUD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN ARUDDY TURNSTONE/NEW JERSEY/47/81)	119-166								
PYRUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ARUDDY TURNSTONE/NEW JERSEY/47/81)	338-405								
PHRAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ARUDDY TURNSTONE/NEW JERSEY/60/81)	49-81								
PYRUC_IAS63	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASEALMASSACHUSETTS/1/80)	338-405								
PIEMA_IASE3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN ASEALMASSACHUSETTS/1/80)	181-431								
PIEMA_IASH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN ASHEW JERSEY/11/76)	39-56	160-183	184-347						
PYRUC_IASH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASHEW JERSEY/11/76)	338-405								
PBUP1_IASIN	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN ASINGAPORE/1/57)	119-166								

BAD ORIGINAL

PCGENE		A/H Viruses (no bacteriophage)									
ID # NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	SEQ ID
PVNUC_IA0N	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	318-465								
PHEMA_IA0TA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STALLING/VICTORIA/31/64)	118-146	181-443							
PVNUC_IA0T9	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OH/1/77)	318-465								
PVNUC_IA0T1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IA/1/69)	318-465								
PVNUC_IA0CA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	318-465								
PHEMA_IA0C0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	40-347	181-451							
PVNUC_IA0DA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/1/81)	318-465								
PVNUC_IA0GE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	318-465								
PHEMA_IA0H3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1/68)	117-137								
PUP1_IA2H3	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1/68)	118-146								
PVNUC_IA0H3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1/68)	318-465								
PVNUC_IA0H4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1/76)	318-465								
PVNUC_IA0H1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	318-465								
PHEMA_IA2H3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	117-137								
PUP1_IA2H3	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	118-146								
PHEMA_IA2IN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/INDIANA/1/79)	118-146	506-547							
PUP1_IA2I1	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1/30)	118-146								
PVNUC_IA2I1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1/30)	318-465								
PVNUC_IA2I3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	318-465								
PVNUC_IA2J3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1118/81)	318-465								
PVNUC_IA2J1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1379)	318-465								
PVNUC_IA2J2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1513/79)	318-465								
PVNUC_IA2J4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1513/79)	318-465								
PVNUC_IA2J5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/1976/81)	318-465								
PVNUC_IA2JA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JAPAN/2/53)	318-465								
PVNUC_IA2NE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NEBRASKA/1/73)	318-465								
PHEMA_IA2NJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/NEW JERSEY/11/76)	118-146	506-547							
PVNUC_IA2OH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/1/77)	318-465								
PVNUC_IA2ON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ONTARIO/2/81)	318-465								
PUP1_IA2T8	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/2/81)	118-146								
PVNUC_IA2TE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/2/81)	318-465								
PUP1_IA2TF	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/8/77)	118-146								
PHEMA_IA2UK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UK/1/64)	117-137								
PVNUC_IA2W1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	318-465								
PVNUC_IA2W2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	318-465								
PHEMA_IA7J	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAIWAN/1/64)	19-36								
PVNUC_IA7EU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/2/81)	318-465								
PHEMA_IA7EA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70/75)	17-33								
PNAM_IA7EA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70/75)	49-73								
PVNUC_IA7E5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	318-465								
PVNS1_IA7A1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/1/75)	119-198								
PVNUC_IA7A1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/1/75)	318-465								
PVNUC_IA7X1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	318-465								
PVNS1_IA7K0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM/GILLIT/1981/81)	119-198								
PVNS1_IA7KC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	119-198								
PHEMA_IA7KJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/81)	117-137								
PVNUC_IA7KT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/6118/68)	318-465								
PHEMA_IA7KW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	117-137	181-443							
PVNS1_IA7KA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	1-116								
PHEMA_IA7KW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	118-146	506-547							
PHEMA_IA0MO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WIN/WO/67/73)	40-63	137-451							

PCGENE		All Viruses (no bacteriophage)										
IDENTIFIER	PROTEIN	VIRUS	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA1	ABEA2
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN AUDOMV01/73)	171-190									
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AUDOMV01/73)	374-401									
PHEMA_IAUS3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AUSSR90/77)	29-36	433-438								
PNRAM_IAUS3	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AUSSR90/77)	36-61									
PVNS1_IAUS3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN AUSSR90/77)	171-188									
PVNUC_IAUS3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AUSSR90/77)	338-403									
PHEMA_IAV1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AVICTOR/A/73)	41-48	388-416								
PRDP1_IAV1	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN AVICTOR/A/73)	118-146	337-354								
PVNUC_IAV1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AVICTOR/A/73)	338-403									
PNRAM_IAV1N1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AMTHALEA/AUS/1964)	46-88									
PVNUC_IAV1N1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMTHALEA/AUS/1964)	338-403									
PVNUC_IAV1P	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMTHALEA/PACIFIC OCEAN/1976)	338-403									
PHEMA_IAW1L	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AWILSON-SMITH/33)	434-457									
PNRAM_IAW1L	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AWILSON-SMITH/33)	16-43									
PRDP1_IAW1L	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN AWILSON-SMITH/33)	118-146									
PVNUC_IAW1L	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AWILSON-SMITH/33)	338-403									
PVNUC_IAW1S	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AWISCONSIN/33)	338-403									
PHEMA_IAX0A	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN AX/ANHENG/89)	18-56									
PRDP1_B1AAC	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	117-144									
PRDP1_B1AAC	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	1-33	412-509								
PRDP1_B1AAD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	164-194									
PRDP1_B1AAD	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	1-33	412-509								
PHEMA_B1BEE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	600-611	619-643								
PHEMA_B1BO0	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/-/-)	190-211	619-635								
PHEMA_B1BEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	198-219	411-441								
PHEMA_B1BJK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	191-218	419-471								
PHEMA_B1BLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	199-210	418-441								
PNRAM_B1BLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	4-15									
PVNS1_B1BLE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/LEE/40)	51-78									
PHEMA_B1BAD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LAYLAND/39)	189-210	418-432								
PHEMA_B1BAE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MELBOURNE/54/84)	193-214	412-438								
PHEMA_B1BOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	198-219	417-441								
PVNS1_B1BTA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/9)	111-138									
PHEMA_B1SI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	198-219	417-441								
PRDP1_B1SI	RNA-DIRECTED RNA POL SUB P1	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	137-194									
PHEMA_B1SU	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	191-212	410-434								
PHEMA_B1VIC	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	600-611	619-643								
PHEMA_B1VI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	191-211	412-436								
PVNS1_B1BTA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/73/73)	51-78									
PRDP1_B1CBS	RNA-DIRECTED RNA POL SUB P1	INFLUENZA C VIRUS (STRAIN C/BERLIN/47)	569-596									
PHEMA_B1CCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	495-511									
PVNUC_B1CCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	496-538	416-441	431-478							
PHEMA_B1CEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	483-559									
PHEMA_B1CGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	483-558									
PHEMA_B1CIT	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ITOCHU/1/81)	483-558									
PRDP1_B1CJ1	RNA-DIRECTED RNA POL SUB P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	568-598									
PVMAT_B1CJ1	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/JJ/50)	131-185									
PVNS1_B1CJ1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	71-98									
PHEMA_B1CJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	496-512									
PHEMA_B1CKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/KYOTO/1/82)	483-558									
PHEMA_B1CMS	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	483-558									
PHEMA_B1CPA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PARA/81)	483-558									
PHEMA_B1CP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIGBEIJING/1041)	483-559									
PHEMA_B1CP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIGBEIJING/1151)	483-559									
PHEMA_B1CP5	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIGBEIJING/1981)	483-559									
PHEMA_B1CTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1333/47)	483-559									
PHEMA_B1CYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/1/81)	483-559									

TGENE	Identified	All Viruses (no bacteriophage)									
TITLE PAGE	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
?ENV_MLVFU	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-81								
?VGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-130	132-179							
?ENV_MCF1F	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	433-512								
?ENV_MCF1J	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI-1)	486-515								
?ENV_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	100-141								
?DNB1_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	104-118								
?PCI1_MCMVS	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	661-691								
?VGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	181-408	641-653							
?IE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	181-388								
?YE1_PCPVI	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	217-394	137-361							
?YE1_PCPVI	PROBABLE E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	33-47								
?ENV_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538								
?POL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	216-261	105-831							
?ENV_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-539								
?POL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-121	190-217							
?DNB1_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	111-461	132-159							
?POL2_IPAVS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	260-341	1015-1053	1115-1192						
?POL2_IPAVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	101-133								
?ENV_SIVAI	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (AGM155 ISOLATE)	289-310	161-181	597-619	613-639	697-724				
?POL_SIVAI	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (AGM155 ISOLATE)	431-458	161-174	617-637						
?POL_SIVA2	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (AGM1436 ISOLATE)	43-72								
?ENV_SIVAG	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (AGM1 ISOLATE)	310-901	166-191	597-624	615-641	701-730				
?POL_SIVAG	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (AGM1 ISOLATE)	416-463	161-176	641-669						
?POL_SIVAJ	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (AGM3 ISOLATE)	31-98								
?ENV_SIVAS	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (TYO-1 ISOLATE)	281-301	151-611	643-669	691-718					
?GAG_SIVAS	GAG POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (TYO-1 ISOLATE)	86-115								
?POL_SIVAS	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (TYO-1 ISOLATE)	496-537								
?ENV_SIVAJ	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (ISOLATE AGM1/CLONE GRI-1)	237-291	216-232	561-603	624-701					
?GAG_SIVAJ	GAG POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (ISOLATE AGM1/CLONE GRI-1)	431-507								
?NEF_SIVAJ	NEGATIVE FACTOR	SIMIAN BAROONDOO ICIENCY VIRUS (ISOLATE AGM1/CLONE GRI-1)	76-137								
?POL_SIVAJ	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (ISOLATE AGM1/CLONE GRI-1)	416-515								
?VIF_SIVAJ	VIRION INFECTIVITY FACTOR	SIMIAN BAROONDOO ICIENCY VIRUS (ISOLATE AGM1/CLONE GRI-1)	1-36								
?ENV_SIVGB	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (ISOLATE AGM1/CLONE GB1)	8-55	118-183	589-610	714-814					
?POL_SIVGB	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (ISOLATE GB1)	333-374	616-630							
?ENV_SIVK1	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (K1W ISOLATE)	333-408								
?GAG_SIVK1	GAG POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (K1W ISOLATE)	88-115								
?POL_SIVK1	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (K1W ISOLATE)	331-360								
?ENV_SIVM1	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (K1N ISOLATE)	149-608								
?ENV_SIVM1	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (MNE/40-81 ISOLATE)	120-150	330-609	671-715						
?POL_SIVM1	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (MNE/40-81 ISOLATE)	333-360								
?ENV_SIVM2	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (MNE/23 ISOLATE)	154-215	277-289							
?GAG_SIVS1	GAG POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (PBJ/SC1 ISOLATE)	286-313	546-722							
?POL_SIVS1	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (PBJ/SC1 ISOLATE)	88-115								
?GAG_SIVS1	GAG POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (PBJ/SC1 ISOLATE)	496-526								
?ENV_SIVAT	ENV POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (STM ISOLATE)	86-111								
?POL_SIVAT	POL POLYPROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (TYO-1 ISOLATE)	3-30	268-298	590-617	611-638					
?NEF_SIVAT	NEF PROTEIN	SIMIAN BAROONDOO ICIENCY VIRUS (TYO-1 ISOLATE)	617-691								
?ENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	41-68								
?POL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	421-430								
?GAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (SMRV)	1214-1412	650-697							
?EXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	221-260								
?HELI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-139								
?RIR1_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	490-517	701-728							
?TEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146								
?UL14_VZVD	HYPOTHETICAL GENE 14 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1131-1158	1578-1609							
?UL33_VZVD	GENE 33 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101								
			180-407								

PCGENE	(97a17bb)	All Viruses (no bacteriophage)									
DNAMARK	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PUL10_VZVD	VIRION GENE 10 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	113-139								
PUL11_VZVD	GENE 11 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-134	495-517	519-546	976-1003					
PUL11_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	110-164								
PUL18_VZVD	GENE 18 NUCLEOCAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	135-156	173-189							
PUL33_VZVD	PROB DNA REP GENE 8 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	101-133								
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	191-223								
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	172-206	495-527							
PVTEG_VZVD	MORALE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	199-421								
PVGLC_VZVE	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	191-223								
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	185-216								
PDPOL_WHV10	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 10	190-111								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	212-143	190-111							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-141	189-110							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-142	190-111							

TABLE VIII

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL PROCARYOTIC PROTEINS

PCGENE	107s178s4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
P120K_RICRI	120 KD SURFACE-EXPOSED PROTEIN	RICKETTSIA RICKETTSII	83-110	240-298	355-382	638-672	746-838	1168-1202			
P17K_RICTY	17 KD ANTIGEN PRECURSOR	RICKETTSIA TYPHI	67-94								
P190K_RICRI	190 KD ANTIGEN PRECURSOR (CELL SURFACE)	RICKETTSIA RICKETTSII	241-268	460-487	607-634	754-781	829-856	904-931	1220-1254	1544-1571	1723-1750
			2065-2096	2131-2168							
P22KD_DESMO	22.6 KD PROTEIN	DESULFUROCOCCUS MOBILIS	25-52	59-89	120-147						
P40KD_VIBAN	40 KD PROTEIN PRECURSOR	VIBRIO ANGUILLARUM	153-196								
P60M_ECOLI	60 KD INNER-MEMBRANE PROTEIN	ESCHERICHIA COLI	511-538								
P60M_PROMI	60 KD INNER-MEMBRANE PROTEIN	PROTEUS MIRABILIS	14-41								
P65KD_ZYMMO	65 KD PROTEIN	ZYMOMONAS MOBILIS	95-122	444-524							
P6PGD_BACSU	PROB 6-PHOSPHOGLUCONATE DEHYDROGENASE	BACILLUS SUBTILIS	24-51	218-246							
P6PGD_ECOLI	6-PHOSPHOGLUCONATE DEHYDROGENASE	ESCHERICHIA COLI	205-232								
P6PGD_SALTY	6-PHOSPHOGLUCONATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	205-232								
PAACA_STAAU	6'-AMINOGLYCOSIDE N-ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	450-477								
PAAT_BACSP	ASPARTATE AMINOTRANSFERASE	BACILLUS SP	146-173	185-212							
PAAT_ECOLI	ASPARTATE AMINOTRANSFERASE	ESCHERICHIA COLI	351-378								
PABC_ECOLI	ABC PROTEIN	ESCHERICHIA COLI	176-203								
PABIC_LACLA	ABORTIVE PHAGE RESISTANCE PROTEIN ABIC	LACTOCOCCUS LACTIS	85-126	170-204	209-273						
PACCR_AGRTU	TRANSCRIPTIONAL REPRESSOR ACCR	AGROBACTERIUM TUMEFACIENS	127-154								
PACEA_ECOLI	ISOCITRATE LYASE	ESCHERICHIA COLI	398-432								
PACON_BACSU	ACONITATE HYDRATASE	BACILLUS SUBTILIS	48-75								
PACON_ECOLI	ACONITATE HYDRATASE	ESCHERICHIA COLI	41-68	613-640							
PACOR_ALCEU	ACETOIN CATABOLISM REG PRO	ALCALIGENES EUTROPHUS	85-112								
PACP_ECOLI	ACYL CARRIER PROTEIN	ESCHERICHIA COLI	4-31								
PACRA_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN A PRECURSOR	ESCHERICHIA COLI	213-247								
PACRB_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN B	ESCHERICHIA COLI	520-551								
PACRF_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN F	ESCHERICHIA COLI	512-550	726-753							
PACTJ_STRCO	PUTATIVE KETOACYL REDUCTASE	STREPTOMYCES COELICOLOR	157-184								
PACTA_LISMO	ACTIN-ASSEMBLY INDUCING PROTEIN PRECURSOR	LISTERIA MONOCYTOGENES	237-264	576-603							
PACVS_NOCLA	ACV SYNTHETASE	NOCARDIA LACTAMDURANS	3129-3163								
PADAA_BACSU	METPHOSTRIESTER-DNA ALKYLTRANSFERASE	BACILLUS SUBTILIS	136-170								
PADDA_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT A	BACILLUS SUBTILIS	398-425	454-481	522-556	1005-1032					
PADDB_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT B	BACILLUS SUBTILIS	257-284	870-903	943-977						
PADH1_CLOAB	NADPH-DEPENDENT BUTANOL DEHYDROGENASE	CLOSTRIDIUM ACETOBUTYLICUM	284-311								
PADHA_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE A	CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHB_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE B	CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHE_CLOAB	ALCOHOL DEHYDROGENASE	CLOSTRIDIUM ACETOBUTYLICUM	653-680	779-806							
PADHE_ECOLI	ALCOHOL DEHYDROGENASE	ESCHERICHIA COLI	271-298								
PADIY_ECOLI	PUTATIVE REGULATORY PROTEIN ADIY	ESCHERICHIA COLI	45-72								
PADP1_MYCGE	140 KD ADHESIN PRECURSOR	MYCOPLASMA GENITALIUM	90-131	697-724	923-950	990-1017	1169-1199	1387-1414			
PADP1_MYCPN	ADHESIN P1 PRECURSOR	MYCOPLASMA PNEUMONIAE	1557-1584								
PADT_RICPR	ADP,ATP CARRIER PROTEIN	RICKETTSIA PROWAZEKII	276-307								
PAERA_AERHY	AEROLYSIN PRECURSOR	AEROMONAS HYDROPHILA	278-305								
PAGAL_STRMU	ALPHA-GALACTOSIDASE	STREPTOCOCCUS MUTANS	419-481	597-633							
PAGAR_PSEAT	BETA-AGARASE PRECURSOR	PSEUDOMONAS ATLANTICA	26-53								
PAGR_STAAU	ACCESSORY GENE REGULATOR PROTEIN	STAPHYLOCOCCUS AUREUS	129-159	165-192							
PAIL_YEREN	ATTACH INVAS LOCUS PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	19-46								
PAK1H_ECOLI	ASPARTOKINASE I	ESCHERICHIA COLI	3-30	466-493	503-530						
PAK3H_ECOLI	ASPARTOKINASE II	ESCHERICHIA COLI	51-78	608-635							
PAK3_BACSU	ASPARTATE KINASE II ALPHA AND BETA SUBUNITS	BACILLUS SUBTILIS	266-312								
PAKAB_CORGL	ASPARTATE KINASE ALPHA AND BETA SUBUNITS	CORYNEBACTERIUM GLUTMICUM	5-32								
PALF_ECOLI	FRUCTOSE-BISPHOSPHATE ALDOLASE	ESCHERICHIA COLI	286-316								
PALGB_PSEAE	ALGINATE BIOSYN TRANSL REG PROTEIN ALGB	PSEUDOMONAS AERUGINOSA	160-194								
PALGE_PSEAE	ALGINATE PRODUCTION PROTEIN ALGE PRECURSO	PSEUDOMONAS AERUGINOSA	349-376								
PALGP_PSEAE	TRANSCRIPTIONAL REGULATORY PROTEIN ALGP	PSEUDOMONAS AERUGINOSA	81-115								
PALKB_PSEOL	ALKANE-1 MONOOXYGENASE	PSEUDOMONAS OLEOVORANS	115-142								
PALKT_PSEOL	RUBREDOXIN-NAD(+) REDUCTASE	PSEUDOMONAS OLEOVORANS	138-172	338-365							
PALR3_ECOLI	ALANINE RACEMASE, CATABOLIC PRECURSOR	ESCHERICHIA COLI	9-36								

PCGENE	10/11/94	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PALR_BACST	ALANINE RACEMASE	BACILLUS STEAROTHERMOPHILUS	126-133							
PALS1_BACSU	ALS OPERON REGULATORY PROTEIN	BACILLUS SUBTILIS	119-146							
PALT1_BACSP	AUTOLYSIN PRECURSOR	BACILLUS SP	137-187							
PALT1_BACSU	AUTOLYSIN PRECURSOR	BACILLUS SUBTILIS	147-191							
PALT1_STAAU	AUTOLYSIN	STAPHYLOCOCCUS AUREUS	244-271							
PAMA_STRPN	AMIA PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	223-264	297-338	446-493					
PAMD_PSECL	AMIDASE	PSEUDOMONAS CHLORORAPHIS	72-99							
PAMG_STRPN	OLIGOPEPTIDE TRANSPORT PROTEIN AMIE	STREPTOCOCCUS PNEUMONIAE	187-214							
PAMPA_ECOLI	AMINOPEPTIDASE A/I	ESCHERICHIA COLI	111-138	199-226						
PAMPC_SERMA	BETA-LACTAMASE PRECURSOR	SERRATIA MARCESCENS	231-258							
PAMPL_LICPA	CYTOSOL AMINOPEPTIDASE	RICKETTSIA PROWAZEKII	3-47	72-99						
PAMPN_ECOLI	AMINOPEPTIDASE N	ESCHERICHIA COLI	655-682							
PAMP_ECOLI	X-PRO AMINOPEPTIDASE	ESCHERICHIA COLI	110-137							
PAMPT_THEAQ	AMINOPEPTIDASE T	THERMUS AQUATICUS	281-308							
PAMY1_DICTH	ALPHA-AMYLASE 1	DICTYOGLOMUS THERMOPHILUM	307-334							
PAMY2_DICTH	ALPHA-AMYLASE 2	DICTYOGLOMUS THERMOPHILUM	131-158	307-334						
PAMY2_SALTY	CYTOPLASMIC ALPHA-AMYLASE	SALMONELLA TYPHIMURIUM	70-104							
PAMY3_DICTH	ALPHA-AMYLASE 3	DICTYOGLOMUS THERMOPHILUM	286-307							
PAMY8_BACCI	BETA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	61-88							
PAMY8_BACPO	BETA-AMYLASE	BACILLUS POLYMYXA	60-87	266-293	1143-1184					
PAMY8_CLOTU	BETA-AMYLASE, THERMOPHILIC PRECURSOR	CLOSTRIDIUM THERMOSULFUROGENES	269-296	378-405	459-486					
PAMY9_CLOSP	GLUCOAMYLASE PRECURSOR	CLOSTRIDIUM SP	103-148	480-510						
PAMYM_BACST	MALTOGENIC ALPHA-AMYLASE PRECURSOR	BACILLUS STEAROTHERMOPHILUS	426-453							
PAMYR_BACSI	RAW-STARCH-DIGESTING AMYLASE	BACILLUS SP	210-237	435-465	615-642					
PAMY_AERHY	ALPHA-AMYLASE PRECURSOR	AEROMONAS HYDROPHILA	415-453							
PAMY_ALTHA	ALPHA-AMYLASE PRECURSOR	ALTEROMONAS HALOPLANKTIS	166-193							
PAMY_BACAM	ALPHA-AMYLASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	103-136							
PAMY_BACCI	ALPHA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	212-239	437-474						
PAMY_BACME	ALPHA-AMYLASE PRECURSOR	BACILLUS MEGATERIUM	61-88	441-482						
PAMY_BACSU	ALPHA-AMYLASE PRECURSOR	BACILLUS SUBTILIS	165-205	281-308						
PAMY_BUTFI	ALPHA-AMYLASE PRECURSOR	BUTYRIVIBRIO FIBRISOLVENS	377-418	546-573	579-606	793-822				
PAMY_CLOAB	PUTATIVE ALPHA-AMYLASE	CLOSTRIDIUM ACETOBUTYLICUM	283-310							
PAMY_CLOTU	ALPHA-AMYLASE PRECURSOR	CLOSTRIDIUM THERMOSULFUROGENES	431-468	612-642						
PAMY_STRLM	ALPHA-AMYLASE PRECURSOR	STREPTOMYCES LIMOSUS	173-200							
PANFA_AZOVI	NITROGEN FIXATION PROTEIN ANFA	AZOTOBACTER VINELANDII	232-259							
PANFD_AZOVI	NITROGENASE IRON-IRON PROTEIN ALPHA CHAIN	AZOTOBACTER VINELANDII	93-122							
PANFK_AZOVI	NITROGENASE IRON-IRON PROTEIN BETA CHAIN	AZOTOBACTER VINELANDII	369-396							
PANGA_VIBAN	ANGA PROTEIN	VIBRIO ANGUILLARUM	93-120	169-203						
PAPCE_FREDI	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	51-78							
PAPCE_LYNPA	PHYCOBILISOME LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	37-64	515-615						
PAPCE_SYNY4	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	SYNECHOCYSTIS SP	52-79							
PAPHC_SALTY	ALKYL HYDROPEROXIDE REDUCTASE C22 PROTEIN	SALMONELLA TYPHIMURIUM	62-89							
PAPI_ACHLY	PROTEASE I PRECURSOR	ACHROMOBACTER LYTICUS	478-505							
PAPPC_ECOLI	PROBABLE CYTOCHROME OXIDASE SUBUNIT I	ESCHERICHIA COLI	118-148							
PAPRD_PSEAE	ALKALINE PROTEASE SECRETION PROTEIN APRD	PSEUDOMONAS AERUGINOSA	416-450							
PAPRE_PSEAE	ALKALINE PROTEASE SECRETION PROTEIN APRE	PSEUDOMONAS AERUGINOSA	133-193	208-235	247-277					
PAPT_ECOLI	ADENOSINE PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	121-148							
PAPU_THEET	ALPHA-AMYLASE-PULLULANASE PRECURSOR	THERMOANAEROBACTER ETHANOLICUS	276-303	347-374	936-982	987-1014	1210-1234	1331-1408		
PARCA_MYCAR	ARGININE DEIMINASE	MYCOPLASMA ARGINI	60-87	218-245						
PARCB_ECOLI	AEROBIC RESPIRATION CONTROL PROTEIN ARCB	ESCHERICHIA COLI	102-150	302-329	399-426					
PARCD_PSEAE	PROBABLE ARGININE/ORNITHINE ANTIPORTER	PSEUDOMONAS AERUGINOSA	274-301	386-420						
PARDA_ECOLI	AMINO-ACID ACETYLTRANSFERASE	ESCHERICHIA COLI	82-109							
PARGT_ECOLI	LYS-ARG-ORN-BINDING PROTEIN (LAO) PRECURSO	ESCHERICHIA COLI	84-111							
PAROA_STAAU	PHOSPHOSERINE-AMINOTRANSFER	STAPHYLOCOCCUS AUREUS	46-120							
PAROC_ECOLI	CHORISMATE SYNTHASE	ESCHERICHIA COLI	68-95							
PAROC_SALTI	CHORISMATE SYNTHASE	SALMONELLA TYPHI	68-95							
PAROD_BACSU	DEHYDROQUINATE DEHYDRATASE	BACILLUS SUBTILIS	49-76							

PGENE	[87:173]:4	Prokaryotic Sequence	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
ID# NAME	PROTEIN	ORGANISM									
PAROK_ECOLI	SHIKIMATE KINASE I	ESCHERICHIA COLI	84-118	127-157	366-324						
PAUP1_STRPY	UDA RECEPTOR PRECURSOR	STREPTOCOCCUS PYOGENES	132-46								
PAUP_ECOLI	AUP PROTEIN	ESCHERICHIA COLI	235-282								
PA1A_ECOLI	ARSENICAL PUMP-DRIVING ATPASE	ESCHERICHIA COLI	201-238								
PA1B_ECOLI	ARSENICAL PUMP MEMBRANE PROTEIN	ESCHERICHIA COLI	291-318								
PA1B_STAAU	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS AUREUS	27-71	295-322							
PA1B_STAXY	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS XYLOSUS	27-71	295-322							
PA1R_STAAU	ARSENICAL RESIST OPERON REPRESSOR PROTEIN	STAPHYLOCOCCUS AUREUS	56-93								
PA1A_ECOLI	ARTA PROTEIN	ESCHERICHIA COLI	3-30								
PA1T_ECOLI	TRANSPORT SYSTEM PROTEIN ARTI	ESCHERICHIA COLI	105-132	211-240							
PA1P_ECOLI	TRANSPORT SYSTEM PROTEIN ARTP	ESCHERICHIA COLI	176-206								
PA5A1_ENTFA	AGGREGATION SUBSTANCE PRECURSOR	ENTEROCOCCUS FAECALIS	193-234	478-505	799-826	859-896					
PA5HA_ECOLI	ASPARTATE--AMMONIA LIGASE	ESCHERICHIA COLI	127-158								
PA5HB_ECOLI	ASPARAGINE SYNTHETASE B	ESCHERICHIA COLI	140-417								
PA5HC_ECOLI	REGULATORY PROTEIN ASNC	ESCHERICHIA COLI	116-141								
PA5PA_BACSU	ASPARTATE AMMONIA-LYASE	BACILLUS SUBTILIS	1-34								
PA5PA_ECOLI	ASPARTATE AMMONIA-LYASE	ESCHERICHIA COLI	204-236								
PA5PA_SERMA	ASPARTATE AMMONIA-LYASE	SERRATIA MARCESCENS	204-231								
PA5PO_BACLI	L-ASPARAGINASE	BACILLUS LICHENIFORMIS	252-288								
PA5PQ_ERWCH	L-ASPARAGINASE PRECURSOR	ERWINIA CHRYSANTHEMI	188-218								
PA5PQ_ACIGL	GLUTAMINASE-ASPARAGINASE	ACINETOBACTER GLUTAMINASIFICANS	46-80								
PA5PY_ECOLI	ARGININOSUCCINATE SYNTHASE	ESCHERICHIA COLI	334-381								
PA5SY_METBA	ARGININOSUCCINATE SYNTHASE	METHANOSARCINA BARKERI	287-314								
PA7BP_STAAU	POTENTIAL ATP-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	41-68	201-245							
PA7KA_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE A	ENTEROCOCCUS FAECALIS	41-80	347-374							
PA7KB_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE B	ENTEROCOCCUS FAECALIS	280-310	450-477							
PA7MB_SALTY	MG(2+) TRANSPORT ATPASE, P-TYPE	SALMONELLA TYPHIMURIUM	303-330								
PA7S_SYNPX	ATP SYNTHASE A CHAIN	SYNECHOCOCCUS SP	133-160								
PA7M_VIBAL	ATP SYNTHASE A CHAIN	VIBRIO ALGINOLYTICUS	11-38								
PATPA_ANASP	ATP SYNTHASE ALPHA CHAIN	ANABAENA SP	9-36	96-130							
PATPA_BACME	ATP SYNTHASE ALPHA CHAIN	BACILLUS MEGATERIUM	4-36	433-480							
PATPA_ECOLI	ATP SYNTHASE ALPHA CHAIN	ESCHERICHIA COLI	486-513								
PATPA_ENTFA	ATP SYNTHASE ALPHA CHAIN	ENTEROCOCCUS FAECALIS	4-36	484-518							
PATPA_MYCGA	ATP SYNTHASE ALPHA CHAIN	MYCOPLASMA GALLISEPTICUM	162-409								
PATPA_PROMO	ATP SYNTHASE ALPHA CHAIN	PROPIONIGENIUM MODESTUM	6-36								
PATPA_RHORU	ATP SYNTHASE ALPHA CHAIN	RHODOSPIRILLUM RUBRUM	165-200	459-486							
PATPA_SULAC	ATPASE ALPHA CHAIN	SULFOLOBUS ACIDOCALDARIUS	318-345	502-529							
PATPA_SYNP1	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	7-44								
PATPA_SYNP6	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	8-45	382-389							
PATPA_SYNY3	ATP SYNTHASE ALPHA CHAIN	SYNECHOCYSTIS SP	8-37	434-500							
PATPA_THEP3	ATP SYNTHASE ALPHA CHAIN	THERMOPHILIC BACTERIUM PS3	9-36								
PATPA_VIBAL	ATP SYNTHASE ALPHA CHAIN	VIBRIO ALGINOLYTICUS	464-513								
PATPB_ANASP	ATP SYNTHASE BETA CHAIN	ANABAENA SP	280-307	376-397							
PATPB_BACFI	ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	161-190	358-383							
PATPB_MYCGA	ATP SYNTHASE BETA CHAIN	MYCOPLASMA GALLISEPTICUM	373-402								
PATPB_RHORU	ATP SYNTHASE BETA CHAIN	RHODOSPIRILLUM RUBRUM	339-386								
PATPB_SULAC	ATPASE BETA CHAIN	SULFOLOBUS ACIDOCALDARIUS	184-191								
PATPB_SYNP1	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	331-408								
PATPB_SYNP6	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	291-318	381-408							
PATPB_SYNY3	ATP SYNTHASE BETA CHAIN	SYNECHOCYSTIS SP	381-408								
PATPD_ANASP	ATP SYNTHASE DELTA CHAIN	ANABAENA SP	109-139	143-170							
PATPD_BACFI	ATP SYNTHASE DELTA CHAIN	BACILLUS FIRMUS	61-90	133-160							
PATPD_BACME	ATP SYNTHASE DELTA CHAIN	BACILLUS MEGATERIUM	132-159								
PATPD_ENTFA	ATP SYNTHASE DELTA CHAIN	ENTEROCOCCUS FAECALIS	14-41								
PATPD_PROMO	ATP SYNTHASE DELTA CHAIN	PROPIONIGENIUM MODESTUM	79-116	118-149							
PATPD_RHOBL	ATP SYNTHASE DELTA CHAIN	RHODOPSEUDOMONAS BLASTICA	125-152								
PATPD_RHORU	ATP SYNTHASE DELTA CHAIN	RHODOSPIRILLUM RUBRUM	119-146								

PCGENE	107a178a4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PATPD_SYNP1	ATP SYNTHASE DELTA CHAIN	SYNECHOCOCCUS SP	108-127								
PATPD_SYNY3	ATP SYNTHASE DELTA CHAIN	SYNECHOCYSTIS SP	113-147								
PATPD_VIBAL	ATP SYNTHASE DELTA CHAIN	VIBRIO ALGINOLYTICUS	116-137								
PATPE_BACFI	ATP SYNTHASE EPSILON CHAIN	BACILLUS FIRMUS	53-80								
PATPE_MYCGA	ATP SYNTHASE EPSILON CHAIN	MYCOPLASMA GALLISEPTICUM	99-126								
PATPE_PROMO	ATP SYNTHASE EPSILON CHAIN	PROPIONIGENIUM MODESTUM	100-137								
PATPE_SYNP1	ATP SYNTHASE EPSILON CHAIN	SYNECHOCOCCUS SP	72-106								
PATPF_ANASP	ATP SYNTHASE B CHAIN	ANABAENA SP	17-44	51-78	137-164						
PATPF_BACFI	ATP SYNTHASE B CHAIN	BACILLUS FIRMUS	116-131								
PATPF_BACME	ATP SYNTHASE B CHAIN	BACILLUS MEGATERIUM	55-85	122-170							
PATPF_MYCGA	ATP SYNTHASE B CHAIN	MYCOPLASMA GALLISEPTICUM	82-133	170-197							
PATPF_SYNP1	ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	15-49	111-159							
PATPF_SYNY6	ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	12-39	128-155							
PATPF_THEP3	ATP SYNTHASE B CHAIN PRECURSOR	THERMOPHILIC BACTERIUM PS-3	50-77								
PATPG_ANASP	ATP SYNTHASE GAMMA CHAIN	ANABAENA SP	276-310								
PATPG_ECOLI	ATP SYNTHASE GAMMA CHAIN	ESCHERICHIA COLI	251-283								
PATPG_MYCGA	ATP SYNTHASE GAMMA CHAIN	MYCOPLASMA GALLISEPTICUM	28-62	92-140							
PATPG_RHORU	ATP SYNTHASE GAMMA CHAIN	RHODOSPIRILLUM RUBRUM	276-297								
PATPG_SYNP1	ATP SYNTHASE GAMMA CHAIN	SYNECHOCOCCUS SP	280-307								
PATPG_SYNY3	ATP SYNTHASE GAMMA CHAIN	SYNECHOCYSTIS SP	96-126	280-307							
PATPI_MYCGA	ATP SYNTHASE PROTEIN I	MYCOPLASMA GALLISEPTICUM	133-167								
PATPX_ANASP	ATP SYNTHASE B' CHAIN	ANABAENA SP	129-156								
PATPX_BACFI	ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	162-189	336-383							
PATPX_RHORU	ATP SYNTHASE B' CHAIN	RHODOSPIRILLUM RUBRUM	40-74								
PATPX_SYNP1	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	57-110	128-155							
PATPX_SYNY6	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	70-100								
PATPX_SYNY3	ATP SYNTHASE B' CHAIN	SYNECHOCYSTIS SP	108-135								
PATPZ_BACME	ATP SYNTHASE PROTEIN I	BACILLUS MEGATERIUM	14-62								
PATPZ_SYNP1	ATP SYNTHASE PROTEIN I	SYNECHOCOCCUS SP	90-131								
PAVAB_PSESO	AVIRULENCE B PROTEIN	PSEUDOMONAS SYRINGAE	184-211	233-260							
PBA11_EUBSP	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53								
PBA12_EUBSP	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53								
PBACH_HALRM	HALORHODOPSIN	HALOBACTERIUM HALOBIUM	145-179								
PBACH_HALSG	HALORHODOPSIN PRECURSOR	HALOBACTERIUM SP	180-214								
PBAES_ECOLI	SENSOR PROTEIN BAES	ESCHERICHIA COLI	132-186								
PBAO_STRAO	IGA FC RECEPTOR PRECURSOR	STREPTOCOCCUS AGALACTIAE	92-119	138-204	267-306	343-383	487-524	562-589	1014-1041		
PBANO_VITSP	BACTERIAL HEMOGLOBIN	VITREOSCILLA SP	119-146								
PBAOC_EUBSP	BILE ACID-INDUCIBLE OPERON PROTEIN C	EUBACTERIUM SP	423-450								
PBAPA_ECOLI	SENSOR PROTEIN BAJA	ESCHERICHIA COLI	334-361	423-453							
PBAS3_ECOLI	SENSOR PROTEIN BA53	ESCHERICHIA COLI	132-158								
PBAT_HALHA	PUTATIVE BACTERIO-OPSIN ACTIVATOR	HALOBACTERIUM HALOBIUM	401-442								
PBAX_ECOLI	BAX PROTEIN	ESCHERICHIA COLI	21-64								
PBCCP_ECOLI	BIOTIN CARBOXYL CARRIER PROTEIN	ESCHERICHIA COLI	6-35								
PBCHM_RHOCA	METHYL-TRANSFERASE	RHODOBACTER CAPSULATUS	1000-1032								
PBCHN_RHOCA	PROTOCHLOROPHYLLIDE REDUCTASE 46 KD CHAIN	RHODOBACTER CAPSULATUS	249-276								
PBCN3_CLOPE	BACTERIOCIN BCN3	CLOSTRIDIUM PERFRINGENS	72-99	385-646							
PBCPA_PROAS	BACTERIOCHLOROPHYLL A PROTEIN	PROSTHECOCHLORIS AESTUARII	63-91								
PBCSC_ACEXY	CELLULOSE SYNTHASE OPERON C PROTEIN	ACETOBACTER XYLINUM	131-158	1035-1082							
PBCSD_ACEXY	CELLULOSE SYNTHASE OPERON D PROTEIN	ACETOBACTER XYLINUM	10-37								
PBENA_ACICA	BENZOATE 1,2-DIOXYGENASE ALPHA SUBUNIT	ACINETOBACTER CALCOACETICUS	196-217								
PBETT_ECOLI	HIGH AFFINITY CHOLINE TRANSPORT PROTEIN	ESCHERICHIA COLI	240-270								
PBEXA_HAEIN	BEXA PROTEIN	HAEMOPHILUS INFLUENZAE	23-50								
PBEXC_HAEIN	BEXC PROTEIN	HAEMOPHILUS INFLUENZAE	151-184	226-253							
PBEXD_HAEIN	BEXD PROTEIN	HAEMOPHILUS INFLUENZAE	205-239								
PBFR_NITWI	BACTERIOFERRITIN	NITROBACTER WINOGRADSKYI	8-35								
PBGAL_ECOLI	EVOLVED BETA-GALACTOSIDASE ALPHA-SUBUNIT	ESCHERICHIA COLI	935-985								
PBGAL_BACST	BETA-GALACTOSIDASE	BACILLUS STEAROTHERMOPHILLUS	599-633								

PCGENE	1097s178x4	Prokaryotic Sequences								
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PBGAL_CLOAB	BETA-GALACTOSIDASE	CLOSTRIDIUM ACETOBUTYLICUM	824-851								
PBGAL_CLOTU	BETA-GALACTOSIDASE	CLOSTRIDIUM THERMOSULFUROGENES	161-191								
PBGAL_KLEPN	BETA-GALACTOSIDASE	KLEBSIELLA PNEUMONIAE	245-272								
PBGAL_LACDE	BETA-GALACTOSIDASE	LACTOBACILLUS DELBRUECKII	305-332								
PBGAL_STRTR	BETA-GALACTOSIDASE	STREPTOCOCCUS THERMOPHILUS	188-215								
PBGAL_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	59-86	179-206							
PBGAM_LEULA	BETA-GALACTOSIDASE SMALL SUBUNIT	LEUCONOSTOC LACTIS	129-156								
PBGAM_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	106-140								
PBGLA_CLOTM	BETA-GLUCOSIDASE A	CLOSTRIDIUM THERMOCELLUM	353-380	418-445							
PBGLB_CLOTM	THERMOSTABLE BETA-GLUCOSIDASE B	CLOSTRIDIUM THERMOCELLUM	259-286	375-409	554-581	631-665					
PBGLR_ECOLI	BETA-GLUCURONIDASE	ESCHERICHIA COLI	464-490	536-563							
PBGLS_AGRSP	BETA-GLUCOSIDASE	AGROBACTERIUM SP	421-448								
PBGLS_BUTFI	BETA-GLUCOSIDASE A	BUTYRIVIBRIO FIBRISOLVENS	85-112	435-462	692-719	738-765					
PBINJ_STAAU	POTENTIAL DNA-INVERTASE BINJ	STAPHYLOCOCCUS AUREUS	60-87								
PBINL_STAAU	TRANSPOSON TN552 RESOLVASE	STAPHYLOCOCCUS AUREUS	163-197								
PBINR_STAAU	DNA-INVERTASE BINR	STAPHYLOCOCCUS AUREUS	163-190								
PBIOA_BACSH	AMINOTRANSFERASE	BACILLUS SPHAERICUS	33-60								
PBIOB_BACSH	BIOTIN SYNTHETASE	BACILLUS SPHAERICUS	145-172								
PBIOB_ECOLI	BIOTIN SYNTHETASE	ESCHERICHIA COLI	130-157								
PBIOD_BACSH	DETHIOBIOTIN SYNTHASE	BACILLUS SPHAERICUS	144-171								
PBLA1_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	91-118	275-305							
PBLA1_HAEIN	BETA-LACTAMASE ROB-1 PRECURSOR	HAEMOPHILUS INFLUENZAE	152-179	204-231							
PBLA2_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	18-67	201-228							
PBLA2_BACSP	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS SP	18-67								
PBLA3_BACCE	BETA-LACTAMASE PRECURSOR, TYPE III	BACILLUS CEREUS	35-83	95-129							
PBLA4_PSEAE	BETA-LACTAMASE PSE-4 PRECURSOR	PSEUDOMONAS AERUGINOSA	19-50								
PBLAB_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	20-66	200-227							
PBLAB_BACFR	BETA-LACTAMASE PRECURSOR, TYPE II	BACTEROIDES FRAGILIS	22-49								
PBLAC_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	93-120	276-303							
PBLAC_BACLI	BETA-LACTAMASE PRECURSOR	BACILLUS LICHENIFORMIS	47-74	86-115							
PBLAC_PROMI	BETA-LACTAMASE PRECURSOR	PROTEUS MIRABILIS	191-221								
PBLAC_PROVU	BETA-LACTAMASE	PROTEUS VULGARIS	4-38	240-267							
PBLAC_STRAL	BETA-LACTAMASE PRECURSOR	STREPTOMYCES ALBUS G	43-70								
PBLAD_KLEPN	BETA-LACTAMASE PRECURSOR	KLEBSIELLA PNEUMONIAE	121-148								
PBLAI_STAAU	PENICILLINASE REPRESSOR	STAPHYLOCOCCUS AUREUS	19-74	99-126							
PBLAO_ECOLI	BETA-LACTAMASE PRECURSOR	ESCHERICHIA COLI	118-166	235-262							
PBLAP_ECOLI	BETA-LACTAMASE PSE-2 PRECURSOR	ESCHERICHIA COLI	155-196								
PBLAR_BACLI	REGULATORY PROTEIN BLAR1	BACILLUS LICHENIFORMIS	129-156	515-552							
PBLAR_STAAU	REGULATORY PROTEIN BLAR1	STAPHYLOCOCCUS AUREUS	87-114	122-161	234-261	281-312	503-539				
PBMP_TREPA	BASIC MEMBRANE PROTEIN PRECURSOR	TREPONEMA PALLIDUM	312-346								
PBMR_BACSU	MULTIDRUG RESISTANCE PROTEIN	BACILLUS SUBTILIS	277-304								
PBNZA_PSEPU	BENZENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PBNZB_PSEPU	BENZENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PBNZD_PSEPU	P4 SUBUNIT	PSEUDOMONAS PUTIDA	179-213								
PBPS2_DESAM	BPS2 PROTEIN	DESULFUROLOBUS AMBIVALENS	157-237	242-290	311-355	391-425	543-573				
PBRAB_PSEAE	CARRIER PROTEIN	PSEUDOMONAS AERUGINOSA	260-287	313-340							
PBRAE_PSEAE	TRANSPORT PROTEIN BRAE	PSEUDOMONAS AERUGINOSA	254-281								
PBRAO_PSEAE	BRAO PROTEIN	PSEUDOMONAS AERUGINOSA	7-34								
PBTUB_ECOLI	VITAMIN B12 RECEPTOR PRECURSOR	ESCHERICHIA COLI	439-466								
PBTUE_ECOLI	VITAMIN B12 TRANSPORT PERIPLASMIC PROTEIN	ESCHERICHIA COLI	6-33								
PBVGA_BORPE	TRANSCRIPTION REGULATOR BVGA	BORDETELLA PERTUSSIS	174-205								
		BORDETELLA BRONCHISEPTICA									
PBVGB_BORPE	PERIPLASMIC PROTEIN BVGB PRECURSOR	BORDETELLA PERTUSSIS	116-143								
PBVGC_BORPE	SENSOR PROTEIN BVGC	BORDETELLA PERTUSSIS	39-66	202-229							
PBVGS_BORBR	VIRULENCE BVGS PROTEIN PRECURSOR	BORDETELLA BRONCHISEPTICA	113-143	341-368	501-531						
PBXA_CLOBO	BOTULINUM NEUROTOXIN TYPE A PRECURSOR	CLOSTRIDIUM BOTULINUM	313-340	686-729	733-762	815-842	851-893	968-995	1139-1207		
PBXB_CLOBO	BOTULINUM NEUROTOXIN TYPE B PRECURSOR	CLOSTRIDIUM BOTULINUM	666-693	720-762	802-832	853-890	1004-1031	1058-1089			

PCGENE	18Jul94	Prokaryote Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PBXC1_CLOBO	BOTULINUM NEUROTOXIN TYPE C1 PRECURSOR	CLOSTRIDIUM BOTULINUM	86-113	314-341	710-773	798-825	850-892				
PBXD_CLOBO	BOTULINUM NEUROTOXIN TYPE D PRECURSOR	CLOSTRIDIUM BOTULINUM	473-500	526-576	723-770	804-811	847-892	906-963	1060-1087		
PBXE_CLOBO	BOTULINUM NEUROTOXIN TYPE E PRECURSOR	CLOSTRIDIUM BOTULINUM	234-291	350-381	704-753	773-811	890-917	992-1019	1113-1149		
PBXB_CLOBU	BOTULINUM NEUROTOXIN TYPE B PRECURSOR	CLOSTRIDIUM BUTYRICUM	234-291	350-381	704-753	774-808	890-917	992-1019	1113-1149		
PBXF_CLOBO	BOTULINUM NEUROTOXIN TYPE F PRECURSOR	CLOSTRIDIUM BOTULINUM	669-710	735-772	892-919	1013-1040	1095-1122	1183-1210			
PC150_MICAE	CYTOCHROME C150	MICROCYSTIS AERUGINOSA	3-30								
PCADA_BACTI	PROBABLE CADMIUM-TRANSPORTING ATPASE	BACILLUS FIRMUS	30-57	100-131	165-192	276-306	533-567				
PCADA_STAAU	PROBABLE CADMIUM-TRANSPORTING ATPASE	STAPHYLOCOCCUS AUREUS	282-309	336-370							
PCADC_ECOLI	TRANSCRIPTIONAL ACTIVATOR CADC	ESCHERICHIA COLI	34-85	412-443							
PCAF1_YERPE	F1 CAPSULE ANCHORING PROTEIN PRECURSOR	YERSINIA PESTIS	203-240	416-457	510-557	619-646					
PCAPA_BACAN	CAPA PROTEIN	BACILLUS ANTHRACIS	108-138								
PCAPB_BACAN	CAPB PROTEIN	BACILLUS ANTHRACIS	36-70								
PCAPP_ANANT	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANACYSTIS NIDULANS	248-293								
PCAPP_ANASP	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANABAENA SP	98-125	157-184	617-728						
PCAPP_CORGL	PHOSPHOENOLPYRUVATE CARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	13-42								
PCAPP_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYLASE	ESCHERICHIA COLI	13-62								
PCARA_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	274-319								
PCARB_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	790-831								
PCARB_ECOLI	CARBAMOYL-PHOSPHATE SYNTHASE LARGE CHAI	ESCHERICHIA COLI	454-481								
PCAT2_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCAT3_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCATA_ACICA	CATECHOL 1,2-DIOXYGENASE	ACINETOBACTER CALCOACETICUS	31-65								
PCATA_BACST	PEROXIDASE / CATALASE	BACILLUS STEAROTHERMOPHILUS	440-470								
PCATA_ECOLI	CATALASE HPI	ESCHERICHIA COLI	579-606								
PCATA_MICLU	CATALASE	MICROCOCCUS LUTEUS	413-440								
PCATA_SALTY	CATALASE HPI	SALMONELLA TYPHIMURIUM	513-542	580-607							
PCATE_ECOLI	CATALASE HPII	ESCHERICHIA COLI	173-202								
PCAT_CAMCO	CHLORAMPHENICOL ACETYLTRANSFERASE	CAMPYLOBACTER COLI	84-111								
PCAT_CLOBU	CHLORAMPHENICOL ACETYLTRANSFERASE	CLOSTRIDIUM BUTYRICUM	88-115								
PCAT_ECOLI	CHLORAMPHENICOL ACETYLTRANSFERASE	ESCHERICHIA COLI	92-119								
PCAT_PROMI.	CHLORAMPHENICOL ACETYLTRANSFERASE	PROTEUS MIRABILIS	92-119								
PCAT_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS INTERMEDIUS	7-34	87-114							
PCAT_STRAG	CHLORAMPHENICOL ACETYLTRANSFERASE	STREPTOCOCCUS AGALACTIAE	7-34	87-114							
PCBHE_COXBU	CBHE PROTEIN	COXIELLA BURNETII	209-236								
PCBPT_THEVU	CARBOXYPEPTIDASE T PRECURSOR	THERMOACTINOMYCES VULGARIS	48-75								
PCCA_ECOLI	TUNA NUCLEOTIDYLTRANSFERASE	ESCHERICHIA COLI	376-403								
PCCMK_SYNP7	CO2 CONC MECH PROTEIN CCMK	SYNECHOCOCCUS SP	29-56								
PCCMM_SYNP7	CO2 CONC MECH PROTEIN CCMM	SYNECHOCOCCUS SP	212-256	331-372	445-486						
PCDA1_THEET	CYCLOMALTODEXT GLUCANOTRANSFERASE	THERMOANAEROBACTER ETHANOLICUS	305-332								
PCDG1_BACMA	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	439-466	616-643							
PCDG1_BACMA	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	210-231	436-466	615-642						
PCDGT_BACCI	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS CIRCULANS	217-244	442-472	594-651						
PCDGT_BACLI	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS LICHENIFORMIS	217-244	442-472	594-647						
PCDGT_BACOM	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS OHBENSIS	410-471								
PCDGT_BACSO	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	433-462	615-642						
PCDGT_BACSU	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	409-471								
PCDGT_BACSU	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	614-641						
PCDGT_BACTP	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	433-465	615-642						
PCDGT_BACSS	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS SP	217-244	442-472	594-651						
PCDGT_BACST	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	BACILLUS STEAROTHERMOPHILUS	586-646								
PCDGT_KLEPN	CYCLOMALTODEXT GLUCANOTRANS PRECURSOR	KLEBSIELLA PNEUMONIAE	212-239								
PCEA1_ECOLI	COLICIN E1 PROTEIN	ESCHERICHIA COLI	44-71	285-326							
PCEA1_SHIDY	COLICIN E1* PROTEIN	SHIGELLA SONNEI	44-71	284-325	413-440						
PCEA2_ECOLI	COLICIN E2	ESCHERICHIA COLI	334-368								
PCEA3_ECOLI	COLICIN E3	ESCHERICHIA COLI	334-368								
PCEA6_ECOLI	COLICIN E6	ESCHERICHIA COLI	334-368								
PCEAB_ECOLI	COLICIN B	ESCHERICHIA COLI	285-341								

PCGENE	107s178s4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCEAD_ECOLI	COLICIN D	ESCHERICHIA COLI	284-311								
PCEAM_ECOLI	COLICIN M	ESCHERICHIA COLI	178-227								
PCEAN_ECOLI	COLICIN N	ESCHERICHIA COLI	119-146	173-200							
PCEA_CITFR	COLICIN A	CITROBACTER FREUNDII	228-258								
PCEFD_STRCL	ISOPENICILLIN N EPIMERASE	STREPTOMYCES CLAVULIGERUS	370-397								
PCEIA_ECOLI	COLICIN IA PROTEIN	ESCHERICHIA COLI	68-95	255-282	378-412	415-452					
PCEIB_ECOLI	COLICIN IB PROTEIN	ESCHERICHIA COLI	68-95	255-282	378-412	415-452					
PCELA_ACEXY	UTP URIDYLYLTRANSFERASE	ACETOBACTER XYLINUM	59-89								
PCELA_ECOLI	PROTEIN CELA	ESCHERICHIA COLI	76-103								
PCFAA_ECOLI	CFA/I FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	27-58								
PCFAC_ECOLI	CFA/I FIMBRIAL SUBUNIT C PRECURSOR	ESCHERICHIA COLI	138-187	388-456	561-595						
PCFAD_ECOLI	CFA/I FIMBRIAL SUBUNIT D	ESCHERICHIA COLI	133-160								
PCFAE_ECOLI	CFA/I FIMBRIAL SUBUNIT E	ESCHERICHIA COLI	180-207	244-271							
PCH10_ACYPS	10 KD CHAPERONIN	ACYRTHOSIPHON PISUM SYMBIOTIC BACTERIU	57-95								
PCH10_BACSU	10 KD CHAPERONIN	BACILLUS SUBTILIS	66-93								
PCH10_CHLTR	10 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	64-91								
PCH10_ECOLI	10 KD CHAPERONIN	ESCHERICHIA COLI	57-84								
PCH10_HAEDU	10 KD CHAPERONIN	HAEMOPHILUS DUCREYI	68-95								
PCH10_LEGMI	10 KD CHAPERONIN	LEGIONELLA MICDADEI	57-84								
PCH10_RICTS	10 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	65-92								
PCH10_THEPJ	10 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	66-93								
PCH60_ACYPS	60 KD CHAPERONIN	ACYRTHOSIPHON PISUM SYMBIOTIC BACTERIU	341-382								
PCH60_AGRTU	60 KD CHAPERONIN	AGROBACTERIUM TUMEFACIENS	117-163	339-370	425-466						
PCH60_AMOPS	60 KD CHAPERONIN	AMOEBA PROTEUS SYMBIOTIC BACTERIUM	299-333								
PCH60_BACSU	60 KD CHAPERONIN	BACILLUS SUBTILIS	298-332	337-364							
PCH60_BORBU	60 KD CHAPERONIN	BORRELIA BURGDORFERI	125-163	299-368							
PCH60_BRUAB	60 KD CHAPERONIN	BRUCELLA ABORTUS	117-144	339-366							
PCH60_CHLPN	60 KD CHAPERONIN	CHLAMYDIA PNEUMONIAE	4-31								
PCH60_CHLTR	60 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	4-31								
PCH60_CHRVI	60 KD CHAPERONIN	CHROMATIUM VINOSUM	300-327								
PCH60_CLOAB	60 KD CHAPERONIN	CLOSTRIDIUM ACETOBUTYLICUM	238-332	337-364	455-482						
PCH60_CLOPE	60 KD CHAPERONIN	CLOSTRIDIUM PERFRINGENS	337-368	417-444							
PCH60_COXBU	60 KD CHAPERONIN	COXIELLA BURNETII	300-327	348-382							
PCH60_HAEDU	60 KD CHAPERONIN	HAEMOPHILUS DUCREYI	339-366	417-444							
PCH60_LEGMI	60 KD CHAPERONIN	LEGIONELLA MICDADEI	299-333								
PCH60_LEGPN	60 KD CHAPERONIN	LEGIONELLA PNEUMOPHILA	298-332	452-479							
PCH60_MYCLE	60 KD CHAPERONIN	MYCOBACTERIUM LEPRAE	125-152	236-263	337-364						
PCH60_MYCTU	60 KD CHAPERONIN	MYCOBACTERIUM TUBERCULOSIS & BOVIS	125-152	337-364							
PCH60_PSEAE	60 KD CHAPERONIN	PSEUDOMONAS AERUGINOSA	339-366								
PCH60_RHILV	60 KD CHAPERONIN	RHIZOBIUM LEGUMINOSARUM	117-163	322-370	425-466						
PCH60_RICTS	60 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	103-130	293-336	360-394						
PCH60_SYNP7	60 KD CHAPERONIN	SYNECHOCOCCUS SP	308-335	337-380							
PCH60_SYNY3	60 KD CHAPERONIN	SYNECHOCYSTIS SP	338-365	455-489							
PCH60_THEPJ	60 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	337-364								
PCH62_STRAL	60 KD CHAPERONIN 2	STREPTOMYCES ALBUS G	116-148	337-364							
PCHB_VIBHA	N,N'-DIACETYLCHITOBIASE PRECURSOR	VIBRIO HARVEYI	21-48	772-799							
PCHEA_BACSU	CHEMOTAXIS PROTEIN CHEA	BACILLUS SUBTILIS	373-400	590-617							
PCHEA_ECOLI	CHEMOTAXIS PROTEIN CHEA	ESCHERICHIA COLI	256-286								
PCHEA_SALTY	CHEMOTAXIS PROTEIN CHEA	SALMONELLA TYPHIMURIUM	162-197								
PCHER_BACSU	CHEMOTAXIS PROTEIN METHYLTRANSFERASE	BACILLUS SUBTILIS	124-151								
PCHEW_ECOLI	PURINE-BINDING CHEMOTAXIS PROTEIN	ESCHERICHIA COLI	68-115								
PCHEW_SALTY	PURINE-BINDING CHEMOTAXIS PROTEIN	SALMONELLA TYPHIMURIUM	88-115								
PCHEY_ECOLI	CHEMOTAXIS PROTEIN CHEY	ESCHERICHIA COLI	22-49								
PCHEY_SALTY	CHEMOTAXIS PROTEIN CHEY	SALMONELLA TYPHIMURIUM	22-49								
PCHI1_BACCI	CHITINASE A1 PRECURSOR	BACILLUS CIRCULANS	491-518	566-593							
PCHIA_ALTSO	CHITINASE A PRECURSOR	ALTEROMONAS SP	345-372								
PCHIA_SERMA	CHITINASE A PRECURSOR	SERRATIA MARCESCENS	346-373								

PCGENE	10Jul1994	Prokaryotic Sequences									
CLIA NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PCHID_BACCI	CHITINASE D PRECURSOR	BACILLUS CIRCULANS	102-161	189-216							
PCHIT_SACER	CHITINASE	SACCHAROPOLYSPORA ERYTHRAEA	92-119								
PCHIT_STRPL	CHITINASE 63 PRECURSOR	STREPTOMYCES PLICATUS	230-284								
PCHMU_BACSU	CHORISMATE MUTASE	BACILLUS SUBTILIS	3-37								
PCHOD_BREST	CHOLESTEROL OXIDASE PRECURSOR	BREVIBACTERIUM STEROLICUM	265-290								
PCHTA_VIBCH	CHOLERA ENTEROTOXIN, A CHAIN PRECURSOR	VIBRIO CHOLERAE	79-106								
PCHYA_AGRTU	BETA-(1->3)GLUCAN EXPORT PROTEIN	AGROBACTERIUM/RHIZOBIUM FACIENS	4-31	181-208							
PCHVE_AGRTU	RECEPTOR PROTEIN CHVE PRECURSOR	AGROBACTERIUM TUMEFACIENS	100-127								
PCIRI_CITFR	CITROLYSIN PROTEIN I	CITROBACTER FREUNDII	435-462								
PCIRA_ECOLI	COLICIN I RECEPTOR PRECURSOR	ESCHERICHIA COLI	146-173								
PCISA_BACSU	PUTATIVE DNA RECOMBINASE	BACILLUS SUBTILIS	378-405								
PCISY_ACIAN	CITRATE SYNTHASE	ACINETOBACTER ANITRATUS	143-170								
PCISY_BACCO	CITRATE SYNTHASE	BACILLUS COAGULANS	24-51								
PCITA_SALTY	CITRATE-PROTON SYMPORT	SALMONELLA TYPHIMURIUM	134-181								
PCITN_KLEPN	CITRATE-SODIUM SYMPORT	KLEBSIELLA PNEUMONIAE	194-221								
PCITN_SALDU	CITRATE-SODIUM SYMPORT	SALMONELLA DUBLIN	194-221								
PCITN_SALPU	CITRATE-SODIUM SYMPORT	SALMONELLA PULLORUM	194-221								
PCLCA_PSEPU	CHLOROCATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS PUTIDA	13-36								
PCLD1_ECOLI	CHAIN LENGTH DETERMINANT PROTEIN	ESCHERICHIA COLI	133-167								
PCLD2_ECOLI	CHAIN LENGTH DETERMINANT PROTEIN	ESCHERICHIA COLI	178-212	250-277							
PCLD_SALTY	CHAIN LENGTH DETERMINANT PROTEIN	SALMONELLA TYPHIMURIUM	96-127	151-212							
PCLO5_CLOHI	ALPHA-CLOSTRIPAIN PRECURSOR	CLOSTRIDIUM HISTOLYTICUM	30-58	497-524							
PCLPA_ECOLI	ATP-BINDING SUBUNIT CLPA	ESCHERICHIA COLI	635-695								
PCLPA_RHOBL	CLP A HOMOLOG PROTEIN	RHODOPSEUDOMONAS BLASTICA	439-466								
PCLPB_BACNO	CLP B HOMOLOG PROTEIN	BACTEROIDES NODOSUS	116-157	442-476	558-595						
PCLPB_ECOLI	CLP B PROTEIN	ESCHERICHIA COLI	444-489	563-590							
PCLPX_AZOVI	CLP X HOMOLOG PROTEIN	AZOTOBACTER VINELANDII	215-242	322-339							
PCLPX_ECOLI	ATP-BINDING SUBUNIT CLP X	ESCHERICHIA COLI	235-282								
PCNTG_ECOLI	2',3'-CYCLIC-NUCLEOTIDE 2'-PHOSPHODIESTERASE PRECURSOR	ESCHERICHIA COLI	50-77								
PCODA_ECOLI	CYTOSINE DEAMINASE	ESCHERICHIA COLI	102-129								
PCOMI_BACSU	A COMPETENCE PROTEIN I	BACILLUS SUBTILIS	108-135	186-213							
PCOMQ_BACSU	COMPETENCE REGULATORY PROTEIN	BACILLUS SUBTILIS	134-239								
PCOP6_STAAU	COP-6 PROTEIN	STAPHYLOCOCCUS AUREUS	7-53								
PCOPB_PSESM	COPPER RESISTANCE PROTEIN B PRECURSOR	PSEUDOMONAS SYRINGAE	140-167								
PCORA_ECOLI	MAGNESIUM/COBALT TRANSPORT PROTEIN CORA	ESCHERICHIA COLI	134-161								
PCORA_SALTY	MAGNESIUM/COBALT TRANSPORT PROTEIN CORA	SALMONELLA TYPHIMURIUM	134-161								
PCOTE_BACSU	SPORE COAT PROTEIN E	BACILLUS SUBTILIS	42-92								
PCOXI_BRAJA	CYTOCHROME C OXIDASE POLYPEPTIDE I	BRADYRHIZOBIUM JAPONICUM	380-407								
PCOXI_PARDE	CYTOCHROME C OXIDASE POLYPEPTIDE I	PARACOCCUS DENITRIFICANS	383-410								
PCOXI_RHOSH	CYTOCHROME C OXIDASE POLYPEPTIDE I	RHODOBACTER SPHAEROIDES	396-423								
PCOXX_BACFI	OXIDASE ASSEMBLY FACTOR	BACILLUS FIRMUS	36-63								
PCOXX_BACSU	OXIDASE ASSEMBLY FACTOR	BACILLUS SUBTILIS	49-76								
PCP1B_NEIGO	CRYPTIC PLASMID PROTEIN B	NEISSERIA GONORRHOEAE	72-99	165-209							
PCP3B_ECOLI	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	ESCHERICHIA COLI	309-336								
PCP3B_SALTY	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	311-338								
PCP7A_ECOLI	SENSOR PROTEIN CPXA	ESCHERICHIA COLI	234-281								
PCP7O_STRSQ	CYTOCHROME P450 105C1	STREPTOMYCES SP	157-184								
PCP7U_SACER	6-DEOXYERYTHRONOLIDE B (DEB) HYDROXYLASE	SACCHAROPOLYSPORA ERYTHRAEA	333-360								
PCP7U4_BACSU	CYTOCHROME P450 109	BACILLUS SUBTILIS	240-283								
PCP7U_ANASP	PROBABLE CYTOCHROME P450	ANABAENA SP	98-125								
PCR37_BACTI	27 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	153-187								
PCR37_BACTM	27 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	153-187								
PCR41_BACSH	1.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308								
PCR42_BACSH	1.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308								
PCR43_BACSH	41.9 KD INSECTICIDAL TOXIN	BACILLUS SPHAERICUS	276-308								
PCR70_BACTD	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	207-234	252-279	429-463						
PCR76_BACTO	75 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	57-84	125-159	427-464						

PGENE	18Jul1994	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA	AREA	AREA	AREA	AREA	AREA	AREA	AREA	AREA
PCR79_BACTT	79 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	199-226	244-271	421-455						
PCR72_BACTK	79 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-133	191-218	552-615						
PCR72_BACTI	72 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	74-111	383-414							
PCR72_BACTK	79 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-133	191-218	552-593						
PCR77_BACTI	77 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	308-333	502-529							
PCREC_ECOLI	SENSOR PROTEIN CREC	ESCHERICHIA COLI	103-130								
PCRED_ECOLI	INNER MEMBRANE PROTEIN CRED	ESCHERICHIA COLI	94-121								
PCRP_ECOLI	CATABOLITE GENE ACTIVATOR	ESCHERICHIA COLI & SHIGELLA FLEXNERI	26-53	127-154							
PCRP_SALTY	CATABOLITE GENE ACTIVATOR	SALMONELLA TYPHIMURIUM	26-53	127-154							
PCRTI_ERWHE	PHYTOENE DEHYDROGENASE	KLEBSIELLA AEROGENES ERWINIA HERBICOLA	231-258								
PCRTI_RHOCA	PHYTOENE DEHYDROGENASE	RHODOBACTER CAPSULATUS	388-416								
PCRTI_RHOCA	CRTI PROTEIN	RHODOBACTER CAPSULATUS	133-160	334-361	431-458						
PCRY5_BACTA	133 KD CRYSTAL PROTEIN	BACILLUS TIIURINGIENSIS	721-755	875-902							
PCRY5_BACTB	130 KD CRYSTAL PROTEIN	BACILLUS TIIURINGIENSIS	730-771	865-892	1033-1080						
PCRY5_BACTE	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRY5_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS TIIURINGIENSIS	218-252	701-728	775-802						
PCRY5_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1033-1080						
PCRY5_BACTS	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYT_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS TIIURINGIENSIS	730-771	865-892	1033-1080						
PCRYT_BACTE	134 KD CRYSTAL PROTEIN	BACILLUS TIIURINGIENSIS	745-779	899-926							
PCRYT_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	354-384	701-728	775-802					
PCRYT_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892							
PCRYT_BACTS	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYU_BACTA	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	700-727	774-801						
PCRYU_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	738-772	866-893	1034-1081						
PCRYU_BACTK	131 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1033-1080						
PCRYV_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	110-151	745-772	819-846						
PCRYV_BACTI	135 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCRYV_BACTK	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	745-779								
PCRYW_BACTA	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	408-459	662-696	892-919						
PCRYW_BACTK	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	93-110	227-254	605-631	783-817	937-964				
PCRYX_BACTK	139 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	42-69	328-355	590-617	744-778					
PCS33_ECOLI	CS3 PILI SYNTHESIS 43 KD PROTEIN	ESCHERICHIA COLI	90-117	154-181	208-242						
PCS34_ECOLI	CS3 PILI SYNTHESIS 33 KD PROTEIN	ESCHERICHIA COLI	20-47	74-108							
PCS0_HALHA	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM HALOBIUM	256-283	584-611							
PCS0_HALVO	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM VOLCANII	143-170	233-251							
PCS0_METFE	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS FERVIDUS	59-107								
PCS0_METSC	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS SOCIABILIS	59-107								
PCS0B_ECOLI	CS1 FIMBRIAL SUBUNIT B PRECURSOR	ESCHERICHIA COLI	25-56								
PCTA_CLOAB	COA-TRANSFERASE SUBUNIT A	CLOSTRIDIUM ACETOBUTYLICUM	118-145								
PCTB_CLOAB	COA-TRANSFERASE SUBUNIT B	CLOSTRIDIUM ACETOBUTYLICUM	174-208								
PCTB_NEIME	INNER-MEMBRANE PROTEIN CTLB	NEISSERIA MENINGITIDIS	152-193								
PCTX_PSEAE	CYTOTOXIN PRECURSOR	PSEUDOMONAS AERUGINOSA	78-115	124-151	160-194	217-251					
PCVAA_ECOLI	COLICIN V SECRETION PROTEIN CVAA	ESCHERICHIA COLI	104-138	161-219							
PCVAB_ECOLI	COLICIN V SECRETION PROTEIN CVAB	ESCHERICHIA COLI	151-178								
PCWTM_BACBR	MIDDLE CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	197-224	411-438	1010-1044						
PCWTO_BACBR	OUTER CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	178-216	560-587	947-988						
PCYAA_BORPE	ADENYLATE CYCLASE PRECURSOR	BORDETELLA PERTUSSIS	48-71	632-659	962-996						
PCYAA_YEREN	ADENYLATE CYCLASE	YERSINIA INTERMEDIA	340-387	591-620							
PCYAB_BORPE	CYAB PROTEIN	BORDETELLA PERTUSSIS	341-368								
PCYAD_BORPE	CYAD PROTEIN	BORDETELLA PERTUSSIS	178-212								
PCYAE_BORPE	CYAE PROTEIN	BORDETELLA PERTUSSIS	313-340								
PCYB_RHOCA	CYTOCHROME B	RHODOBACTER CAPSULATUS	38-65								
PCYDD_ECOLI	TRANSPORT PROTEIN CYDD	ESCHERICHIA COLI	1-30	382-409							
PCYF_NOSSP	APOCYTOCHROME F PRECURSOR	NOSTOC SP	209-243								

PCGENE	107x173x4	Prokaryotic Sequences									
TITLE NAME	PROTEIN	ORGANISM	ΔBEA1	ΔBEA1	ΔBEA1	ΔBEA1	ΔBEA1	ΔBEA1	ΔBEA1	ΔBEA1	ΔBEA1
PCYMO_ACISP	CYCLOHEXANONE MONOOXYGENASE	ACINETOBACTER SP	439-493								
PCYNT_SYN77	CARBONIC ANHYDRASE	SYNECHOCOCCUS SP	176-200								
PCYNX_ECOLI	CYNX PROTEIN	ESCHERICHIA COLI	33-80								
PCYOB_ECOLI	CYTOCHROME O UBIQUINOL OXIDASE SUBUNIT I	ESCHERICHIA COLI	31-58								
PCYPH_SYN77	PEPTIDYL-PROLYL CIS-TRANS ISOMERASE	SYNECHOCOCCUS SP	107-141								
PCYTA_ECOLI	SULFATE PERMEASE A PROTEIN	ESCHERICHIA COLI	164-191								
PCYTB_ECOLI	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	3-30								
PCYTB_SALTY	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	SALMONELLA TYPHIMURIUM	3-30								
PCYTE_ECOLI	SERINE ACETYLTRANSFERASE	ESCHERICHIA COLI	164-191								
PCYTE_SALTY	SERINE ACETYLTRANSFERASE	SALMONELLA TYPHIMURIUM	164-191								
PCYTO_ECOLI	SIROHEM SYNTHASE	ESCHERICHIA COLI	405-432								
PCYTO_SALTY	SIROHEM SYNTHASE	SALMONELLA TYPHIMURIUM	405-432								
PCYTR_ECOLI	SULFATE ADENYLATE TRANSFERASE SUBUNIT 1	ESCHERICHIA COLI	64-91								
PCYTW_ECOLI	SULFATE PERMEASE W PROTEIN	ESCHERICHIA COLI	201-238								
PCYTW_SYN77	SULFATE PERMEASE W PROTEIN	SYNECHOCOCCUS SP	211-238								
PCZCB_ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCB	ALCALIGENES EUTROPHUS	241-268	283-320	364-391						
PCZCD_ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCD	ALCALIGENES EUTROPHUS	139-166								
PDACB_BACSU	PENICILLIN-BINDING PROTEIN 5* PRECURSOR	BACILLUS SUBTILIS	80-107								
PDADA_ECOLI	D-AMINO ACID DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PDAGA_ALTHA	NA(+)-LINKED D-ALANINE GLYCINE PERMEASE	ALTEROMONAS HALOPLANKTIS	333-373								
PDAMX_ECOLI	DAMX PROTEIN	ESCHERICHIA COLI	68-95	248-280							
PDAPA_ECOLI	DIHYDRODIPICOLINATE SYNTHASE	ESCHERICHIA COLI	27-54	157-184							
PDATI_BACSU	DNA-PROTEIN-CYSTEINE METHYLTRANSFERASE	BACILLUS SUBTILIS	13-47								
PDBHA_ECOLI	DNA-BINDING PROTEIN HU-ALPHA	ESCHERICHIA COLI	12-39								
PDBH_CLOPA	DNA-BINDING PROTEIN HU	CLOSTRIDIUM PASTEURIANUM	12-53								
PDCAM_CORGL	DECARBOXYLASE PROENZYME	ESCHERICHIA COLI	146-173								
PDCDA_CORGL	DIAMINOPIMELATE DECARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	134-161								
PDCDA_PSEAE	DIAMINOPIMELATE DECARBOXYLASE	PSEUDOMONAS AERUGINOSA	57-84								
PDCEB_ECOLI	GLUTAMATE DECARBOXYLASE BETA	ESCHERICHIA COLI	4-31								
PDCHS_ENTAE	HISTIDINE DECARBOXYLASE	ENTEROBACTER AEROGENES	111-138								
PDCHS_KLEPL	HISTIDINE DECARBOXYLASE	KLEBSIELLA PLANTICOLA	111-138								
PDCHS_MORMO	HISTIDINE DECARBOXYLASE	MORGANELA MORGANII	111-138								
PDCID_BACSU	DIPEPTIDE TRANSPORT PROTEIN DCIAD	BACILLUS SUBTILIS	188-222								
PDCLY_HAFAL	LYSINE DECARBOXYLASE	HAFNIA ALVEI	303-332								
PDCOA_KLEPN	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	KLEBSIELLA PNEUMONIAE	261-288	342-369							
PDCOA_SALTY	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	SALMONELLA TYPHIMURIUM	261-288	342-369							
PDCOB_SALTY	OXALOACETATE DECARBOXYLASE BETA CHAIN	SALMONELLA TYPHIMURIUM	299-326								
PDCTB_RHILE	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIUM LEGUMINOSARUM	377-411								
PDCTB_RHIME	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIUM MELILOTI	311-338								
PDEAD_ECOLI	ATP-DEPENDENT RNA HELICASE DEAD	ESCHERICHIA COLI	268-295	518-545							
PDEAD_KLEPN	ATP-DEPENDENT RNA HELICASE DEAD	KLEBSIELLA PNEUMONIAE	267-294	519-546							
PDEDA_ECOLI	DEDA PROTEIN	ESCHERICHIA COLI	106-133								
PDEGS_BACSU	SENSOR PROTEIN DEGS	BACILLUS SUBTILIS	31-70	73-159	292-327						
PDEHQ_MORSP	HALOACETATE DEHALOGENASE H-1	MORAXELLA SP	114-141								
PDEOC_ECOLI	DEOXYRIBOSE-PHOSPHATE ALDOLASE	ESCHERICHIA COLI	134-161								
PDHAL_PSEPU	ALDEHYDE DEHYDROGENASE	PSEUDOMONAS OLEOVORANS	6-33								
PDHAS_BACSU	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	BACILLUS SUBTILIS	156-184								
PDHAS_CORGL	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	41-70	112-139							
PDHAS_ECOLI	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	ESCHERICHIA COLI	229-256								
PDHAS_VIBCH	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	VIBRIO CHOLERAE	209-236								
PDHA_BACSH	ALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	149-176								
PDHA_BACST	ALANINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	94-121								
PDHE3_CLODI	NAD-SPECIFIC GLUTAMATE DEHYDROGENASE	CLOSTRIDIUM DIFFICILE	116-143								
PDHE3_PEPAS	D-SPECIFIC GLUTAMATE DEHYDROGENASE	PEPTOSTREPTOCOCCUS ASACCHAROLYTICUS	247-274	345-380							
PDHE3_SULSO	GLUTAMATE DEHYDROGENASE	SULFOLOBUS SOLFATARICUS	2-36								
PDHEA_CORGL	NADP-SPECIFIC GLUTAMATE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	188-215	239-266							
PDHOA_ACTCA	GLUCOSE DEHYDROGENASE-A	ACINETOBACTER CALCOACETICUS	10-39	190-217							

PGENE	10711314	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
ELE NAME	PROTEIN	ORGANISM									
PDHCB_BACAE	GLUCOSE 1-DEHYDROGENASE B	BACILLUS MEGATERIUM	27-57								
PDHG_ECOLI	GLUCOSE DEHYDROGENASE	ESCHERICHIA COLI	438-463								
PDHK1_STRVN	KETOACYL REDUCTASE 1	STREPTOMYCES VIOLACEORUBER	168-195								
PDHLE_BACST	LEUCINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	192-219								
PDHLO_AGRT4	D-LYSOPINE DEHYDROGENASE	AGROBACTERIUM TUMEFACIENS	317-344								
PDHM1_METEX	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	METHYLOBACTERIUM EXTORQUENS	153-187	190-224							
PDHM1_METOR	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	METHYLOBACTERIUM ORGANOPHILUM	153-187	190-224							
PDHM1_PAUDE	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	PARACOCCUS DENITRIFICANS	195-232								
PDHN_BACSP	NADH DEHYDROGENASE	BACILLUS SP	284-314								
PDHNA_ECOLI	NADH DEHYDROGENASE	ESCHERICHIA COLI	180-214								
PDHOM_BACSU	HOMOSERINE DEHYDROGENASE	BACILLUS SUBTILIS	93-107	408-443							
PDHOM_CORGL	HOMOSERINE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	105-133								
PDHPH_BACSH	PHENYLALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	212-239								
PDHSA_ECOLI	SUCC DEHYDROGENASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI	483-511								
PDHSS_ANACY	SOLUBLE HYDROGENASE 43 KD SUBUNIT	ANABAENA CYLINDRICA	86-113	130-168							
PDHSS_SYNP1	SOLUBLE HYDROGENASE, SMALL SUBUNIT	SYNECHOCOCCUS SP	133-160								
PDHTM_METME	TRIMETHYLAMINE DEHYDROGENASE	METHYLOTROPHUS METHYLOPHILUS	439-466								
PDING_ECOLI	PROBABLE ATP-DEPENDENT HELICASE DING	ESCHERICHIA COLI	384-411								
PDIVB_BACSU	DIVISION INITIATION PROTEIN	BACILLUS SUBTILIS	54-82	114-141							
PDLD1_PSEPU	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS PUTIDA	93-120								
PDLDH_AZOVI	LIPOAMIDE DEHYDROGENASE COMP (E3)	AZOTOBACTER VINELANDII	18-45	224-276							
PDLDH_BACST	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS STEAROTHERMOPHILUS	82-124								
PDLDH_BACSU	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS SUBTILIS	82-109								
PDLDH_ECOLI	DIHYDROLIPOAMIDE DEHYDROGENASE	ESCHERICHIA COLI	108-135								
PDLDH_PSEFL	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	124-151	223-275							
PDMPH_PSEPU	PHENOL HYDROXYLASE P3 PROTEIN	PSEUDOMONAS PUTIDA	63-90								
PDNAI_BACSU	DNAI PROTEIN	BACILLUS SUBTILIS	497-524	548-581							
PDNAJ_BACSU	DNAJ PROTEIN	BACILLUS SUBTILIS	436-483								
PDNAA_BACSU	DNAA PROTEIN	BACILLUS SUBTILIS	110-180								
PDNAA_BORBU	DNAA PROTEIN	BORRELIA BURGDORFERI	182-216	248-275	341-387	436-463					
PDNAA_BUCAP	DNAA PROTEIN	BUCHNERA APHIDICOLA	73-100	111-138	355-380						
PDNAA_ECOLI	DNAA PROTEIN	ESCHERICHIA COLI	366-400								
PDNAA_MUCLU	DNAA PROTEIN	MICROCOCCUS LUTEUS	385-415								
PDNAA_MYCCA	DNAA PROTEIN	MYCOPLASMA CAPRICOLUM	8-36	75-112	274-310	390-389					
PDNAA_PROMI	DNAA PROTEIN	PROTEUS MIRABILIS	365-399								
PDNAA_PSEPU	DNAA PROTEIN	PSEUDOMONAS PUTIDA	398-439								
PDNAA_SPICI	DNAA PROTEIN	SPIROPLASMA CITRI	45-72	76-110	143-180						
PDNAB_CHLTR	DNAB-LIKE PROTEIN	CHLAMYDIA TRACHOMATIS	312-353								
PDNAB_ECOLI	DNAB PROTEIN	ESCHERICHIA COLI	82-109								
PDNAB_SALTY	DNAB PROTEIN	SALMONELLA TYPHIMURIUM	82-109								
PDNAC_ECOLI	DNAC PROTEIN	ESCHERICHIA COLI	146-180								
PDNAC_BACME	DNAC PROTEIN	BACILLUS MEGATERIUM	497-524	548-581							
PDNAK_BORBU	DNAK PROTEIN	BORRELIA BURGDORFERI	512-594								
PDNAK_BRUOV	DNAK PROTEIN	BRUCELLA OVIS	248-275	512-546							
PDNAK_CAUCR	DNAK PROTEIN	CAULOBACTER CRESCENTUS	161-188								
PDNAK_CLOAB	DNAK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	499-526								
PDNAK_CLOPE	DNAK PROTEIN	CLOSTRIDIUM PERFRINGENS	496-537								
PDNAK_METMA	DNAK PROTEIN	METHANOSARCINA MAZEI	533-590								
PDNAK_MYCTU	DNAK PROTEIN	MYCOBACTERIUM TUBERCULOSIS	502-529								
PDNAK_STRCO	DNAK PROTEIN	STREPTOMYCES COELICOLOR	45-72	533-572							
PDNR_ECOLI	REGULATORY PROTEIN DNR	ESCHERICHIA COLI	114-141								
PDNRJ_ZYMMO	DNA LIGASE	ZYMOMONAS MOBILIS	658-712								
PDNRJ_STRPE	TRANSDUCTION PROTEIN DNRJ	STREPTOMYCES PEUCETIUS	24-51								
PDOCK_SULSO	PROBABLE SIGNAL RECOGNITION PARTICLE PROTE	SULFOLOBUS SOLFATARICUS	104-172								
PDP1A_BACSU	DNA POLYMERASE III, ALPHA CHAIN	BACILLUS SUBTILIS	58-85	417-444	1382-1416						
PDP1A_ECOLI	DNA POLYMERASE III, ALPHA CHAIN	ESCHERICHIA COLI	773-104								
PDP1A_SACER	DNA POLYMERASE III, ALPHA CHAIN	SACCHAROPOLYSPORA ERYTHRAEA	230-257								

PCGENE	107x118x4	Prokaryotic Sequences									
ENTRYNAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PDP3A_SALTY	DNA POLYMERASE III ALPHA CHAIN	SALMONELLA TYPHIMURIUM	77-104								
PDP3B_BACSU	DNA POLYMERASE III BETA CHAIN	BACILLUS SUBTILIS	212-239								
PDP3B_BORBU	DNA POLYMERASE III BETA CHAIN	BORRELIA BURGDORFERI	266-313								
PDP3B_BUCAP	DNA POLYMERASE III BETA CHAIN	BUCHNERA APHIDICOLA	31-62	308-339							
PDP3B_MICLU	DNA POLYMERASE III BETA CHAIN	MICROCOCCUS LUTEUS	191-218								
PDP3B_MYCCA	DNA POLYMERASE III BETA CHAIN	MYCOPLASMA CAPRICOLUM	16-70								
PDP3B_PSEPU	DNA POLYMERASE III BETA CHAIN	PSEUDOMONAS PUTIDA	30-60								
PDP3B_SPICI	DNA POLYMERASE III BETA CHAIN	SPIROPLASMA CITRI	78-112	139-177	273-310						
PDP3X_BACSU	DNA POLYMERASE III SUBUNITS GAMMA AND TAU	BACILLUS SUBTILIS	231-272								
PDPC1_ECOLI	DNA PRIMASE TRAC-3	ESCHERICHIA COLI	691-743								
PDPC1_ECOLI	DNA PRIMASE TRAC-4	ESCHERICHIA COLI	401-448								
PDPN0_STRPN	DPNO PROTEIN	STREPTOCOCCUS PNEUMONIAE	79-120								
PDPO1_BACCA	DNA POLYMERASE I	BACILLUS CALDOTENAX	208-233								
PDPO1_STRPN	DNA POLYMERASE I	STREPTOCOCCUS PNEUMONIAE	198-225	398-433	571-598	645-672					
PDPO1_THEAQ	DNA POLYMERASE	THERMUS AQUATICUS	196-223	602-629							
PDPO1_THEFL	DNA POLYMERASE	THERMUS AQUATICUS	597-628								
PDPO1_ECOLI	DNA POLYMERASE II	ESCHERICHIA COLI	169-196								
PDPOL_PYRFU	DNA POLYMERASE	PYROCOCCUS FURIOSUS	746-773								
PDPOL_SULSO	DNA POLYMERASE	SULFOLOBUS SOLFATARICUS	379-406	436-463	623-659	747-774					
PDPOL_THELI	DNA POLYMERASE	THERMOCOCCUS LITORALIS	332-370	551-589	892-926	1004-1031	1153-1194				
PDP_LACLA	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDP_LACLC	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDP3_ECOLI	DNA PROTECTION DURING STARVATION PROTEIN	ESCHERICHIA COLI	4-45								
PDRN1_STREQ	DEOXYRIBONUCLEASE PRECURSOR	STREPTOCOCCUS EQUISIMILIS	33-60	291-318							
PDRUA_STRPE	DAUNORUBICIN RESISTANCE ATP-BINDING PROTEI	STREPTOMYCES PEUCETIUS	286-311								
PDYRA_STAAU	DIHYDROFOLATE REDUCTASE TYPE I	STAPHYLOCOCCUS AUREUS	62-89								
PE1B_BACCI	GLUCAN ENDO-1,3-BETA-GLUCOSIDASE A1 PREC	BACILLUS CIRCULANS	134-161	305-339	424-451						
PEAE_ECOLI	ATTACHING AND EFFACING PROTEIN	ESCHERICHIA COLI	64-100	138-185	523-552	691-723	802-836	871-905			
PEBGR_ECOLI	EBG OPERON REPRESSOR PROTEIN	ESCHERICHIA COLI	151-178								
PEBR_STAAU	ETHIDIUM BROMIDE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	68-98								
PECRH_RHOCA	ENOYL-COA HYDRATASE HOMOLOG	RHODOBACTER CAPSULATUS	222-249								
PECTD_ECOLI	CHAPERONE PROTEIN ECTD PRECURSOR	ESCHERICHIA COLI	20-47								
PEDD_ZYMMO	PHOSPHOGLUCONATE DEHYDRATASE	ZYMOMONAS MOBILIS	12-39								
PEDIN_STAAU	EPIDERMAL CELL DIF INH PRECURSOR	STAPHYLOCOCCUS AUREUS	32-79	119-146							
PEF1_DESMO	ELONGATION FACTOR 2	DESULFUROCOCCUS MOBILIS	427-461								
PEF2_HALHA	ELONGATION FACTOR 2	HALOBACTERIUM HALOBIUM	186-213								
PEF2_METVA	ELONGATION FACTOR 2	METHANOCOCCUS VANNIELII	409-436								
PEF2_SULAC	ELONGATION FACTOR 2	SULFOLOBUS ACIDOCALDARIUS	36-63	145-180							
PEF2_THEAC	ELONGATION FACTOR 2	THERMOPLASMA ACIDOPHILUM	13-40	49-76	220-247						
PEF0_ANANI	ELONGATION FACTOR G	ANACYSTIS NIDULANS	332-359								
PEF0_ECOLI	ELONGATION FACTOR G	ESCHERICHIA COLI	334-361								
PEF0_MYCLE	ELONGATION FACTOR G	MYCOBACTERIUM LEPRAE	311-339	330-357							
PEF0_SALTY	ELONGATION FACTOR G	SALMONELLA TYPHIMURIUM	334-361								
PEF0_SPIPL	ELONGATION FACTOR G	SPIRULINA PLATENSIS	334-374	481-511							
PEF0_SYNY3	ELONGATION FACTOR G	SYNECHOCYSTIS SP	14-41								
PEFT1_STRAA	ELONGATION FACTOR TU1	STREPTOMYCES RAMOCISSINUS	221-258								
PEFT1_STRRA	ELONGATION FACTOR TU2	STREPTOMYCES RAMOCISSINUS	221-258								
PEFT3_STRRA	ELONGATION FACTOR TU3	STREPTOMYCES RAMOCISSINUS	238-255								
PEFT3_ECOLI	ELONGATION FACTOR EF-TS	ESCHERICHIA COLI	101-133								
PEFT3_SPICI	ELONGATION FACTOR EF-TS	SPIROPLASMA CITRI	127-54	134-161							
PEFTU_BACST	ELONGATION FACTOR TU	BACTEROIDES FRAGILIS	18-45	229-256							
PEFTU_BACSU	ELONGATION FACTOR TU	BACILLUS SUBTILIS	11-45	230-257							
PEFTU_BURCE	ELONGATION FACTOR TU	BURKHOLDERIA CEPACIA	26-53								
PEFTU_CHLTR	ELONGATION FACTOR TU	CHLAMYDIA TRACHOMATIS	218-245								
PEFTU_DESIP	ELONGATION FACTOR TU	DESONEMA SP	230-257								
PEFTU_FLESI	ELONGATION FACTOR TU	FLEXISTIPES SINUSARABICI	221-248								
PEFTU_HALMA	ELONGATION FACTOR TU	HALOARCULA MARISMORTUI	4-31								

PCGENE	19711Jul94	Prokaryotic Sequences	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
FILENAME	PROTEIN	ORGANISM	221-248							
PEFTU_MICLU	ELONGATION FACTOR TU	MICROCOCCUS LUTEUS	222-249							
PEFTU_MYCHO	ELONGATION FACTOR TU	MYCOPLASMA HOMINIS	220-247							
PEFTU_MYCLE	ELONGATION FACTOR TU	MYCOBACTERIUM LEPRAE	220-247							
PEFTU_MYCTU	ELONGATION FACTOR TU	MYCOBACTERIUM TUBERCULOSIS	26-53							
PEFTU_SHEPU	ELONGATION FACTOR TU	SHEWANELLA PUTREFACIENS	232-259							
PEFTU_STRGR	ELONGATION FACTOR TU	STREPTOCOCCUS ORALIS	141-168							
PELAS_PSEAS	PSEUDOLYSIN PRECURSOR	PSEUDOMONAS AERUGINOSA	78-105							
PELTI_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	99-106							
PELTI_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	228-269							
PELTB_CLOPE	T-LABILE ENTEROTOXIN B CHAIN PRECURSOR	CLOSTRIDIUM PERFRINGENS	134-188							
PENTD_ECOLI	ENTEROBACTIN SYNTHETASE COMPONENT D	ESCHERICHIA COLI	34-61							
PENVM_SALTY	ENVM PROTEIN	SALMONELLA TYPHIMURIUM	31-80	125-239	290-335	387-421	457-489			
PEPDB_STAEP	117 KD MEMBRANE ASSOCIATED PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	411-447							
PEPIC_STAEP	EPIDERMIN BIOSYNTHESIS PROTEIN EPIC	STAPHYLOCOCCUS EPIDERMIDIS	1-38	297-324						
PEPIP_STAEP	SERINE PROTEASE EPIP PRECURSOR	STAPHYLOCOCCUS EPIDERMIDIS	9-36	967-994	1117-1144					
PEPIY_STAEP	HYPOTHETICAL 18.7 KD PROTEIN IN EPIA 5'REGION	STAPHYLOCOCCUS EPIDERMIDIS	70-101							
PEPIZ_STAEP	HYPOTHETICAL PROTEIN IN EPIA 5'REGION	STAPHYLOCOCCUS EPIDERMIDIS	42-100							
PERA_ECOLI	GTP-BINDING ERA PROTEIN	ESCHERICHIA COLI	18-45							
PERB1_SACEA	SENSORY TRANSDUCTION PROTEIN ERYC1	SACCHAROPOLYSPORA ERYTHRAEA	209-243							
PEREA_ECOLI	ERYTHROMYCIN ESTERASE TYPE I	ESCHERICHIA COLI	37-64	143-170						
PERIY_SACEA	ERYTHRONOLIDE SYNTHASE, MODULES 5 AND 6	SACCHAROPOLYSPORA ERYTHRAEA	9-36	967-994	1117-1144					
PESTA_STRSC	ESTERASE PRECURSOR	STREPTOMYCES SCABIES	128-155							
PESTE_PSEFL	AMYLESTERASE	PSEUDOMONAS FLUORESCENS	162-189							
PETC1_STAAU	ENTEROTOXIN TYPE C1 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206						
PETC2_STAAU	ENTEROTOXIN TYPE C2 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206						
PETC3_STAAU	ENTEROTOXIN TYPE C-3 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	135-206						
PETXA_STAAU	ENTEROTOXIN TYPE A PRECURSOR	STAPHYLOCOCCUS AUREUS	26-69	185-192						
PETXB_CLOPE	EPSILON-TOXIN TYPE B PRECURSOR	CLOSTRIDIUM PERFRINGENS	209-236							
PETXB_STAAU	ENTEROTOXIN TYPE B PRECURSOR	STAPHYLOCOCCUS AUREUS	64-101	173-207						
PETXD_STAAU	ENTEROTOXIN TYPE D PRECURSOR	STAPHYLOCOCCUS AUREUS	153-200							
PETXE_STAAU	ENTEROTOXIN TYPE E PRECURSOR	STAPHYLOCOCCUS AUREUS	26-69	88-115						
PEUTC_SALTY	ETHANOLAMINE AMMONIA-LYASE LIGHT CHAIN	SALMONELLA TYPHIMURIUM	116-150							
PEVGA_ECOLI	PUTATIVE TRANSCRIPTION REG EVGA	ESCHERICHIA COLI	62-89							
PEVGS_ECOLI	PUTATIVE SENSOR PROTEIN EVGS	ESCHERICHIA COLI	45-79	249-276	431-458	526-553	829-856			
PEXAB_ECOLI	EXODEOXYRIBONUCLEASE V	ESCHERICHIA COLI	226-253							
PEXBB_ECOLI	BIOPOLYMER TRANSPORT EXBB PROTEIN	ESCHERICHIA COLI	80-107							
PEXOA_RHDGE	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOA	RHIZOBIUM MELILOTI	180-207							
PEXOA_STRTM	EXODEOXYRIBONUCLEASE	STREPTOCOCCUS PNEUMONIAE	218-254							
PEXOF_RHDGE	EXOF PROTEIN	RHIZOBIUM MELILOTI	336-370	337-361						
PEXOH_RHDGE	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOH	RHIZOBIUM MELILOTI	232-279							
PEXOP_RHDGE	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EXOP	RHIZOBIUM MELILOTI	211-242	232-299	330-391					
PFAOB_ECOLI	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	ESCHERICHIA COLI	26-63	177-204						
PFAOL_ECOLI	FATTY ACID TRANSPORT PROTEIN PRECURSOR	ESCHERICHIA COLI	220-247							
PFAED_ECOLI	OUTER MEMBRANE PROTEIN FAED PRECURSOR	ESCHERICHIA COLI	223-257	421-453	507-541					
PFAEF_ECOLI	K88 MINOR FIMBRIAL SUBUNIT PRECURSOR	ESCHERICHIA COLI	18-48							
PFAND_ECOLI	FAND PROTEIN PRECURSOR	ESCHERICHIA COLI	160-194	386-423	598-633	730-757				
PFANE_ECOLI	CHAPERONE PROTEIN FANE PRECURSOR	ESCHERICHIA COLI	22-58							
PFANG_ECOLI	FANG PROTEIN PRECURSOR	ESCHERICHIA COLI	104-131							
PFANH_ECOLI	FANH PROTEIN PRECURSOR	ESCHERICHIA COLI	83-141							
PFAOB_PSEFR	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	PSEUDOMONAS FRAGI	8-42	295-322						
PFDHD_WOLSU	FDHD PROTEIN	WOLINELLA SUCCINOGENES	64-98							
PFDHF_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	613-640							
PFDH_PSEFR	FORMATE DEHYDROGENASE	PSEUDOMONAS SP	49-76	366-393						
PFDHO_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	288-315	323-350	696-730					
PFECA_ECOLI	TRANSPORT PROTEIN FECA PRECURSOR	ESCHERICHIA COLI	531-561							
PFECC_ECOLI	TRANSPORT PROTEIN 1, CYTOSOLIC	ESCHERICHIA COLI	210-237							
PFECI_ECOLI	FECI PROTEIN	ESCHERICHIA COLI	131-158							

PCGENE	1107x1178x4	Prokaryotic Sequence								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PFEMD_STAAU	POSSIBLE PROTEIN FEMD	STAPHYLOCOCCUS AUREUS	22-56							
PFENR_SYNP2	FERREDOXIN-NADP REDUCTASE	SYNECHOCOCCUS SP	4-31							
PFEPC_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPC	ESCHERICHIA COLI	176-203							
PFEPE_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPE	ESCHERICHIA COLI	182-234	281-308						
PFEPG_ECOLI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPG	ESCHERICHIA COLI	128-155							
PFERH_ANASP	FERREDOXIN, HETEROCYST	ANABAENA SP	2-29							
PFERX_ANASP	FERREDOXIN-LIKE PROTEIN IN NIF REGION	ANABAENA SP	67-94							
PFHAB_BORPE	FILAMENTOUS HEMAGGLUTININ	BORDETELLA PERTUSSIS	1128-1158	1359-1386	2060-2114	2841-2868	3051-3085	3167-3194		
PFHAC_BORPE	HAEMOLYSIN-LIKE PROTEIN FHAC PRECURSOR	BORDETELLA PERTUSSIS	342-369							
PFHLA_ECOLI	FORMATE HYDROGENLYASE TRANSACTIVATOR	ESCHERICHIA COLI	36-63	330-384	401-428					
PFHUA_ECOLI	FERRICHROME-IRON RECEPTOR PRECURSOR	ESCHERICHIA COLI	438-485							
PFHUB_ECOLI	PROTEIN FHUB PRECURSOR	ESCHERICHIA COLI	227-254							
PFHUE_ECOLI	OUTER-MEMBRANE RECEPTOR	ESCHERICHIA COLI	387-414							
PFIB_SPICI	FIBRIL PROTEIN	SPIROPLASMA CITRI	161-195	326-367						
PFIC_ECOLI	CELL FILAMENTATION PROTEIN FIC	ESCHERICHIA COLI	131-178							
PFIC_SALTY	CELL FILAMENTATION PROTEIN FIC	SALMONELLA TYPHIMURIUM	131-178							
PFIMC_BORPE	OUTER MEMBRANE PROTEIN FIMC PRECURSOR	BORDETELLA PERTUSSIS	208-235	340-367	618-645					
PFIMC_ECOLI	CHAPERONE PROTEIN FIMC PRECURSOR	ESCHERICHIA COLI	31-78							
PFIMD_ECOLI	FIMD PROTEIN PRECURSOR	ESCHERICHIA COLI	222-253	458-485	534-561	563-590				
PFIME_ECOLI	TYPE 1 FIMBRIAE REGULATORY PROTEIN FIME	ESCHERICHIA COLI	165-192							
PFIMY_SALTY	FIMBRIAE Y PROTEIN	SALMONELLA TYPHIMURIUM	49-76							
PFIMZ_ECOLI	FIMBRIAE Z PROTEIN	ESCHERICHIA COLI	42-69	162-192	196-210					
PFIMZ_SALTY	FIMBRIAE Z PROTEIN	SALMONELLA TYPHIMURIUM	173-209							
PFINQ_ECOLI	FINQ PROTEIN	ESCHERICHIA COLI	145-172							
PFIRA_RICRI	FIRA PROTEIN	RICKETTSIA RICKETTSII	162-189							
PFIXC_AZOCA	FIXC PROTEIN	AZORHIZOBIUM CAULINODANS	129-156							
PFIXL_AZOCA	SENSOR PROTEIN FIXL	AZORHIZOBIUM CAULINODANS	243-274							
PFIXL_BRAJA	SENSOR PROTEIN FIXL	BRADYRHIZOBIUM JAPONICUM	27-54	253-280						
PFLAI_BORBU	FLAGELLAR FILAMENT 41 KD CORE PROTEIN	BORRELIA BURGDORFERI	8-35	271-298						
PFLA1_HALHA	FLAGELLIN A1 PRECURSOR	HALOBACTERIUM HALOBIUM	63-92	157-184						
PFLA1_METVO	FLAGELLIN B1 PRECURSOR	METHANOCOCCUS VOLTAE	28-73	133-160						
PFLA3_METVO	FLAGELLIN B3 PRECURSOR	METHANOCOCCUS VOLTAE	28-66							
PFLA3_HALHA	FLAGELLIN B3 PRECURSOR	HALOBACTERIUM HALOBIUM	36-63							
PFLA3_METVO	FLAGELLIN B3 PRECURSOR	METHANOCOCCUS VOLTAE	35-76							
PFLA4_HALHA	FLAGELLIN B3 PRECURSOR	HALOBACTERIUM HALOBIUM	36-90	157-184						
PFLA5_HALHA	FLAGELLIN B3 PRECURSOR	HALOBACTERIUM HALOBIUM	36-63	134-181						
PFLA6_BACSU	FLAA LOCUS 32.9 KD PROTEIN	BACILLUS SUBTILIS	73-149	155-186						
PFLAA_CAMCO	FLAGELLIN A	CAMPYLOBACTER COLI	15-42	144-191	497-533					
PFLAA_CAMJE	FLAGELLIN A	CAMPYLOBACTER JEJUNI	220-266	310-337	500-538					
PFLAA_METVO	FLAGELLIN A PRECURSOR	METHANOCOCCUS VOLTAE	28-42							
PFLAA_PSEAE	FLAGELLIN	PSEUDOMONAS AERUGINOSA	3-41	51-88	97-124					
PFLAA_RHIME	FLAGELLIN	RHIZOBIUM MELILOTI	181-219	228-263	360-391					
PFLAA_SPIAU	FLAGELLAR FILAMENT PROTEIN PRECURSOR	SPIROCHAETA AURANTIA	162-189							
PFLAA_TREHY	FLAGELLAR FILAMENT PROTEIN PRECURSOR	TREPONEMA HYODYSENTERIAE	55-89	219-285						
PFLAA_TREPA	FLAGELLAR FILAMENT OUTER LAYER PROTEIN	TREPONEMA PALLIDUM	243-270							
PFLAB_CAMCO	FLAGELLIN B	CAMPYLOBACTER COLI	144-191	497-533						
PFLAB_CAMJE	FLAGELLIN B	CAMPYLOBACTER JEJUNI	220-266	310-337	500-538					
PFLAB_RHIME	FLAGELLIN	RHIZOBIUM MELILOTI	86-113	177-219	228-255	360-391				
PFLAV_CLOWP	FLAVODOXIN	CLOSTRIDIUM MP	18-52							
PFLAY_CAUCR	REGULATORY PROTEIN FLAY	CAULOBACTER CRESCENTUS	291-318	531-578						
PFLA_BACSU	FLAGELLIN	BACILLUS SUBTILIS	102-129	228-255						
PFLGD_BACSU	FLAGELLAR BASAL-BODY ROD PROTEIN FLGG	BACILLUS SUBTILIS	62-89							
PFLGK_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 1	SALMONELLA TYPHIMURIUM	12-50	333-360	436-540					
PFLGL_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	ESCHERICHIA COLI	61-105	229-266						
PFLGL_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	SALMONELLA TYPHIMURIUM	61-105	229-266						
PFLHD_ECOLI	FLAGELLAR TRANSCRIPTIONAL ACTIVATOR FLHD	ESCHERICHIA COLI	6-33							
PFLIA_PSEAE	FLAGELLAR OPERON RNA POL SIGMA FACTOR	PSEUDOMONAS AERUGINOSA	198-232							

PCGENE	197:1173:4	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
GENE NAME	PROTEIN	ORGANISM									
PFLIC_ECOLI	FLAGELLIN	ESCHERICHIA COLI	3-41	186-213	295-329	431-466					
PFLIC_SALCH	FLAGELLIN	SALMONELLA CHOLERAE-SUIS	3-41	34-123	136-198						
PFLIC_SALMU	FLAGELLIN	SALMONELLA MUENCHEN	3-41	34-88	136-177	212-259	272-299	376-403			
PFLIC_SALPA	FLAGELLIN	SALMONELLA PARATYPHI-A	3-41	34-123	136-184						
PFLIC_SALRU	FLAGELLIN	SALMONELLA RUBISLAW	3-41	34-123	136-196						
PFLIC_SALTY	FLAGELLIN	SALMONELLA TYPHIMURIUM	3-41	34-123	136-200						
PFLIC_SERMA	FLAGELLIN	SERRATIA MARCESCENS		13-42	55-89	101-130	137-164	235-321			
PFLID_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	ESCHERICHIA COLI	32-66	106-133	160-187	216-398	386-445				
PFLID_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	SALMONELLA TYPHIMURIUM	32-66	106-133	235-299	407-438					
PFLIE_BACSU	FLAG HOOK-BASAL BODY PROTEIN FLIE	BACILLUS SUBTILIS	8-35								
PFLIF_BACSU	FLAGELLAR M-RING PROTEIN	BACILLUS SUBTILIS	337-361	391-418							
PFLIF_CAUCR	FLAGELLAR M-RING PROTEIN	CAULOBACTER CRESCENTUS	24-51	297-324	361-388						
PFLIF_SALTY	FLAGELLAR M-RING PROTEIN	SALMONELLA TYPHIMURIUM	484-539								
PFLIG_BACSU	FLAGELLAR SWITCH PROTEIN FLIG	BACILLUS SUBTILIS	35-63								
PFLIG_ECOLI	FLAGELLAR SWITCH PROTEIN FLIG	ESCHERICHIA COLI	44-71								
PFLII_BACSU	PROBABLE FLIII PROTEIN	BACILLUS SUBTILIS	19-46	105-132							
PFLIJ_BACSU	FLAGELLAR FLIJ PROTEIN	BACILLUS SUBTILIS	7-37								
PFLIJ_SALTY	FLAGELLAR FLIJ PROTEIN	SALMONELLA TYPHIMURIUM	35-118	177-244							
PFLIK_BACSU	PROBABLE FLIK PROTEIN	BACILLUS SUBTILIS	137-184								
PFLIL_BACSU	FLIL PROTEIN	BACILLUS SUBTILIS	30-71	78-105	109-136						
PFLIL_ECOLI	FLIL PROTEIN	ESCHERICHIA COLI	105-132								
PFLIL_SALTY	FLIL PROTEIN	SALMONELLA TYPHIMURIUM	103-133								
PFLIM_BACSU	FLIM PROTEIN	BACILLUS SUBTILIS	148-175								
PFLIM_ECOLI	FLIM PROTEIN	ESCHERICHIA COLI	251-278								
PFLIN_CAUCR	FLAGELLAR MOTOR SWITCH PROTEIN	CAULOBACTER CRESCENTUS	36-63								
PFLIS_ECOLI	FLAGELLAR PROTEIN FLIS	ESCHERICHIA COLI	39-86								
PFLIT_SALTY	FLAGELLAR PROTEIN FLIT	SALMONELLA TYPHIMURIUM	9-46	67-106							
PFM12_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	30-67	80-114							
PFM1A_ECOLI	TYPE-1 FIMBRIAL PROTEIN, A CHAIN PRECURSOR	ESCHERICHIA COLI	5-32								
PFM1C_ECOLI	TYPE-1 FIMBRIAL PROTEIN, C CHAIN PRECURSOR	ESCHERICHIA COLI	11-38								
PFM1_ACTVI	FIMBRIAL SUBUNIT TYPE 1 PRECURSOR	ACTINOMYCES VISCOSUS	248-282	332-379	417-444						
PFM99_ECOLI	FIMBRIAL PROTEIN 99FP PRECURSOR	ESCHERICHIA COLI	114-141								
PFMA0_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PFMA1_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PFMA2_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PFMA7_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PFMA8_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	123-150								
PFMAF_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-141								
PFMAH_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	95-122								
PFMAI_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	111-145								
PFMAJ_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	96-123								
PFMCD_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	76-97								
PFMDD_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	335-382							
PFMDH_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	335-382							
PFMF3_ECOLI	F17 FIMBRIAL PROTEIN PRECURSOR	ESCHERICHIA COLI	97-124								
PFMM1_NEIGO	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA MENINGITIDIS	76-97								
PFMM2_NEIGO	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA GONORRHOEAE	66-97								
PFMM_MORNO	FIMBRIAL PROTEIN PRECURSOR	MORAXELLA NONLIQUEFACIENS	108-146								
PFMP1_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	30-67	80-114							
PFMP2_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	76-97	112-139							
PFMS1_ECOLI	CS1 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	60-87								
PFMS3_ECOLI	CS3 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	49-98								
PFM_HAEIN	MAJOR FIMBRIAL SUBUNIT PRECURSOR	HAEMOPHILUS INFLUENZAE	102-129								
PFNBA_STAAU	FIBRONECTIN-BINDING PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	41-83	188-215	311-365	431-458	517-555	652-686	722-756		
PFOLC_ECOLI	FOLYLPOLYGLUTAMATE SYNTHASE	ESCHERICHIA COLI	125-159								
PFOLC_LACCA	FOLYLPOLYGLUTAMATE SYNTHASE	LACTOBACILLUS CASEI	129-156								
PFPO_BACFI	FORMAMIDOPYRIMIDINE-DNA GLYCOSYLASE	BACILLUS FIRMUS	133-180								

PCGENE	10/7/1996	Prokaryotic Sequences								
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PFRDA_ECOLI	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI	195-422								
PFRDA_WOLSU	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	WOLINELLA SUCCINOGENES	8-35	487-514							
PFRZE_MYXXA	GLIDING MOTILITY REGULATORY PROTEIN	MYXOCOCCUS XANTHUS	15-42	478-505							
PFTHS_CLOTH	FORMATE--TETRAHYDROFOLATE LIGASE	CLOSTRIDIUM THERMOACETUM	163-190								
PFTR_METTH	FORMYLTRANSFERASE	METHANOBACTERIUM THERMOAUTOTROPHICU	9-43								
PFTSA_BACSU	CELL DIVISION PROTEIN FTSA	BACILLUS SUBTILIS	76-110								
PFTSA_ECOLI	CELL DIVISION PROTEIN FTSA	ESCHERICHIA COLI	301-338	375-418							
PFTSJ_ECOLI	CELL DIVISION PROTEIN FTSJ	ESCHERICHIA COLI	4-31								
PFTSL_ECOLI	CELL DIVISION PROTEIN FTSL	ESCHERICHIA COLI	61-90								
PFTSN_ECOLI	CELL DIVISION PROTEIN FTSN	ESCHERICHIA COLI	131-188								
PFTSX_ECOLI	CELL DIVISION PROTEIN FTSX	ESCHERICHIA COLI	278-305								
PFTSY_ECOLI	CELL DIVISION PROTEIN FTSY	ESCHERICHIA COLI	230-260								
PFUCR_ECOLI	L-FUCOSE OPERON ACTIVATOR	ESCHERICHIA COLI	7-45								
PFUMA_BACST	FUMARATE HYDRATASE CLASS I, AEROBIC	BACILLUS STEAROTHERMOPHILUS	290-317								
PFUMH_BACSU	FUMARATE HYDRATASE	BACILLUS SUBTILIS	414-445								
PFUR_YERPE	FURIC UPTAKE REGULATION PROTEIN	YERSINIA PESTIS	99-130								
PGJH_ECOLI	GLYC 3-PHOS DEHYDROGENASE A	ESCHERICHIA COLI	202-329								
PGJP2_ANAVA	GLYC 3-PHOS DEHYDROGENASE 2	ANABAENA VARIABILIS	87-114								
PGJP3_ANAVA	GLYC 3-PHOS DEHYDROGENASE 3	ANABAENA VARIABILIS	162-189								
PGJP3_ECOLI	GLYC 3-PHOS DEHYDROGENASE C	ESCHERICHIA COLI	216-324								
PGJP_BACME	GLYC 3-PHOS DEHYDROGENASE	BACILLUS MEGATERIUM	49-76	237-271							
PGJP_BACSU	GLYC 3-PHOS DEHYDROGENASE	BACILLUS SUBTILIS	49-76								
PGJP_PYRWO	GLYC 3-PHOS DEHYDROGENASE	PYROCOCCUS WOESEI	239-286								
PGJP_THEMA	GLYC 3-PHOS DEHYDROGENASE	THERMOTOGA MARITIMA	290-328								
PGMB_BACST	GLUCOSE-6-PHOSPHATE ISOMERASE B	BACILLUS STEAROTHERMOPHILUS	103-143	241-268							
PGMPD_ECOLI	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ESCHERICHIA COLI	101-338								
PGMPD_ZYMMO	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ZYMOMONAS MOBILIS	165-192								
PGNCA_PSEFL	CYANIDE CONTROL PROTEIN	PSEUDOMONAS FLUORESCENS	178-205								
PGOLI_SALTY	GALACTOKINASE	SALMONELLA TYPHIMURIUM	86-113								
PGOLT_HAEIN	GAL-1-PHOS URIDYLYLTRANSFERASE	HAEMOPHILUS INFLUENZAE	124-158	239-269							
PGOLT_LACHE	GAL-1-PHOS URIDYLYLTRANSFERASE	LACTOBACILLUS HELVETICUS	104-338								
PGOLT_SALTY	GALACTOSE OPERON REPRESSOR	SALMONELLA TYPHIMURIUM	53-91								
PGOLR_HAEIN	GALACTOSE OPERON REPRESSOR	HAEMOPHILUS INFLUENZAE	182-209								
PGOL_PSEFL	DE D-GALACTOSE 1-DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	251-278								
PGOH2_ECOLI	GTP CYCLOHYDROLASE II	ESCHERICHIA COLI	78-105								
PGOH2_PHOLE	GTP CYCLOHYDROLASE II	PHOTOBACTERIUM LEIOGNATHI	197-227	246-273							
PGOSH_ECOLI	GLYCINE CLEAVAGE SYSTEM H PROTEIN	ESCHERICHIA COLI	10-37								
PGOSP_ECOLI	GLYCINE DEHYDROGENASE	ESCHERICHIA COLI	216-246								
PGOVA_ECOLI	GLYCINE CLEAVAGE SYSTEM TRANSACTIVATOR	ESCHERICHIA COLI	66-94								
PGOYK_ECOLI	PROTEIN K	ESCHERICHIA COLI	24-51								
PGPE1_BACSU	SPORE GERMINATION PROTEIN 1	BACILLUS SUBTILIS	49-83	182-216	350-384						
PGPE3_BACSU	SPORE GERMINATION PROTEIN III PRECURSOR	BACILLUS SUBTILIS	293-323								
PGPEE_BACSU	GERMINATION PROTEIN GERE	BACILLUS SUBTILIS	13-40								
PGPI2_STAHA	ANTIBACTERIAL PROTEIN 2	STAPHYLOCOCCUS HAEMOLYTICUS	6-33								
PGPI3_STAHA	ANTIBACTERIAL PROTEIN 3	STAPHYLOCOCCUS HAEMOLYTICUS	6-33								
PGPIA_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN A	BACILLUS SUBTILIS	196-423								
PGPIA_ECOLI	GLUCOSE INHIBITED DIVISION PROTEIN A	ESCHERICHIA COLI	333-568								
PGPIA_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN A	PSEUDOMONAS PUTIDA	339-566								
PGPIB_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN B	BACILLUS SUBTILIS	34-61								
PGPIB_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN B	PSEUDOMONAS PUTIDA	15-52								
PGPSP_SYNY3	GLUCOSE TRANSPORT PROTEIN	SYNECHOCYSTIS SP	288-322								
PGPDA_BACST	GLYCEROL DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	20-79								
PGPDA_ECOLI	GLYCOGEN SYNTHASE	ESCHERICHIA COLI	256-283								
PGPGC_ECOLI	GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE	ESCHERICHIA COLI	114-141								
PGPGC_SALTY	GLUCOSE-1-PHOSPHATE ADENYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	114-141								
PGPMS_ECOLI	GLUC-FRUC-6-PHOSPHOMUTRANSFERASE	ESCHERICHIA COLI	209-243								
PGPMT_METTL	GLMB-LIKE PROTEIN 1	METHANOCOCCUS THERMOLITHOTROPHICUS	38-85								

PCGENE	1872.1764	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PGLNA_ANASP	GLUTAMINE SYNTHETASE	ANABAENA SP	8-42								
PGLNA_BACSU	GLUTAMINE SYNTHETASE	BACILLUS SUBTILIS	4-31								
PGLNA_CLOAB	GLUTAMINE SYNTHETASE	CLOSTRIDIUM ACETOBUTYLICUM	413-440								
PGLNA_ECOLI	GLUTAMINE SYNTHETASE	ESCHERICHIA COLI	144-171								
PGLNA_METVO	GLUTAMINE SYNTHETASE	METHANOCOCCUS VOLTAE	203-230								
PGLNA_PROVU	GLUTAMINE SYNTHETASE	PROTEUS VULGARIS	142-169								
PGLNA_PYRFU	GLUTAMINE SYNTHETASE	PYROCOCCUS FURIOSUS	393-421								
PGLNA_SALTY	GLUTAMINE SYNTHETASE	SALMONELLA TYPHIMURIUM	144-171								
PGLNA_STRCO	GLUTAMINE SYNTHETASE	STREPTOMYCES COELICOLOR	186-211								
PGLND_AZOBR	NITROGEN REGULATORY PROTEIN P-II	AZOSPIRILLUM BRASILENSE	15-49								
PGLNB_RHOCA	NITROGEN REGULATORY PROTEIN P-II	RHODOBACTER CAPSULATUS	15-49								
PGLNB_SYN6	NITROGEN REGULATORY PROTEIN P-II	SYNECHOCOCCUS SP	52-79								
PGLND_ECOLI	UDP URIDYLYLTRANSFERASE	ESCHERICHIA COLI	120-147	151-178							
PGLND_SALTY	UDP URIDYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	151-178								
PGLNE_ECOLI	ADENYLYLTRANSFERASE	ESCHERICHIA COLI	103-130	433-460	763-790						
PGLNH_ECOLI	GLUTAMINE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	126-153								
PGLNQ_BACST	GLUTAMINE PERMEASE OPERON PROTEIN GLNQ	BACILLUS STEAROTHERMOPHILUS	7-34								
PGLPD_BACSU	AEROBIC GLYC3-PHOS DEHYDROGENASE	BACILLUS SUBTILIS	194-220								
PGLPD_ECOLI	AEROBIC GLYC3-PHOS DEHYDROGENASE	ESCHERICHIA COLI	410-437								
PGLPF_BACSU	GLYCEROL UPTAKE FACILITATOR PROTEIN	BACILLUS SUBTILIS	235-274								
PGLPK_BACSU	GLYCEROL KINASE	BACILLUS SUBTILIS	48-93								
PGLPK_ECOLI	GLYCEROL KINASE	ESCHERICHIA COLI	36-90								
PGLPR_ECOLI	GLYCEROL-3-PHOSPHATE REGULON REPRESSOR	ESCHERICHIA COLI	5-32								
PGLPX_ECOLI	GLPX PROTEIN	ESCHERICHIA COLI	297-324								
PGLPX_SHIFL	GLPX PROTEIN	SHIGELLA FLEXNERI	297-324								
PGLUX_ECOLI	GLUTAREDOXIN	ESCHERICHIA COLI	24-51								
PGLTB_ECOLI	GLUTAMATE SYNTHASE	ESCHERICHIA COLI	482-509								
PGLTP_ECOLI	PROTON GLUTAMATE SYMPORT PROTEIN	ESCHERICHIA COLI	319-346								
PGLYB_ECOLI	PHOSPHOTRANSFERASE ENZYME TYPE-IIB	ESCHERICHIA COLI	130-157								
PGLYA_BRAJA	SERINE HYDROXYMETHYL TRANSFERASE	BRADYRHIZOBIUM JAPONICUM	29-60								
PGLYA_CAMJE	SERINE HYDROXYMETHYL TRANSFERASE	CAMPYLOBACTER JEJUNI	376-403								
PGLYA_HYPME	SERINE HYDROXYMETHYL TRANSFERASE	HYPHOMICROBIUM METHYLOVORUM	28-55								
PGM01_BACSU	COMG OPERON PROTEIN 1	BACILLUS SUBTILIS	17-67	88-122							
PGNTK_BACSU	GLUCONOKINASE	BACILLUS SUBTILIS	236-271								
PGP1D_CHLTR	VIRULENCE PROTEIN PGP1-D	CHLAMYDIA TRACHOMATIS	112-135								
PGP2D_CHLTR	VIRULENCE PROTEIN PGP2-D	CHLAMYDIA TRACHOMATIS	97-111								
PGP3D_CHLTR	VIRULENCE PROTEIN PGP3-D	CHLAMYDIA TRACHOMATIS	25-52								
PGP4D_CHLTR	VIRULENCE PROTEIN PGP4-D	CHLAMYDIA TRACHOMATIS	63-106	193-220							
PGP7D_CHLTR	VIRULENCE PROTEIN PGP7-D	CHLAMYDIA TRACHOMATIS	12-60								
PGP8D_CHLTR	VIRULENCE PROTEIN PGP8-D	CHLAMYDIA TRACHOMATIS	94-121								
PGREA_MORA	TRANSLOCATION ELONGATION FACTOR GREA	RICKETTSIA PROWAZEKII	13-40								
PGRPE_BACSU	GRPE-LIKE PROTEIN	BACILLUS SUBTILIS	17-33								
PGRPE_BORBU	GRPE-LIKE PROTEIN	BORRELIA BURGDORFERI	2-79								
PGRPE_CLOAB	GRPE-LIKE PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	12-33								
PGRSA_BACSU	GRAMICIDIN S SYNTHETASE	BACILLUS BREVIS	545-572	799-826	840-882	1035-1062					
PGRSB_BACBR	GRAMICIDIN S SYNTHETASE II	BACILLUS BREVIS	48-75	94-121	241-282	1126-1153	1213-1240	2162-2189	2559-2586	2819-2846	3606-3633
PGSH1_ECOLI	GLUTAMATE--CYSTEINE LIGASE	ESCHERICHIA COLI	239-266	274-301							
PGSHA_ECOLI	GLUTATHIONE REDUCTASE	ESCHERICHIA COLI	100-134	270-311							
PGSHA_PSEAE	GLUTATHIONE REDUCTASE	PSEUDOMONAS AERUGINOSA	2-79								
PGSIA_BACSU	STARVATION-INDUCIBLE PROTEIN A	BACILLUS SUBTILIS	10-114								
PGSPD_ERWCA	PROTEIN D PRECURSOR	ERWINIA CAROTOVORA	74-101	265-296							
PGSPD_ERWCH	PROTEIN D PRECURSOR	ERWINIA CHRYSANTHEMI	258-285	316-343	589-619						
PGSPD_KLEPN	PROTEIN D PRECURSOR	KLEBSIELLA PNEUMONIAE	258-302	307-338	551-578	659-686					
PGSPE_ERWCA	PROTEIN E	ERWINIA CAROTOVORA	259-286								
PGSPE_ERWCH	PROTEIN E	ERWINIA CHRYSANTHEMI	329-367								
PGSPE_KLEPN	PROTEIN E	KLEBSIELLA PNEUMONIAE	329-367								
PGSPE_PSEAE	PROTEIN E	PSEUDOMONAS AERUGINOSA	323-361								
			122-149	331-369							

PCGENE	1071171b4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PGSPF_XANCP	PROTEIN F	XANTHOMONAS CAMPESTRIS	230-257								
PGSPH_PSEAE	PROTEIN H PRECURSOR	PSEUDOMONAS AERUGINOSA	18-59								
PGSPI_AERHY	PROTEIN I PRECURSOR	AEROMONAS HYDROPHILA	37-61								
PGSPI_ERWCA	PROTEIN I PRECURSOR	ERWINIA CAROTOVORA	35-62								
PGSPJ_KLEPN	PROTEIN J PRECURSOR	KLEBSIELLA PNEUMONIAE	140-167								
PGSPK_ERWCA	PROTEIN K	ERWINIA CAROTOVORA	28-55								
PGSPK_ERWCH	PROTEIN K	ERWINIA CHRYSANTHEMI	28-55								
PGSPK_KLEPN	PROTEIN K	KLEBSIELLA PNEUMONIAE	28-55								
PGSPK_PSEAE	PROTEIN K	PSEUDOMONAS AERUGINOSA	73-99								
PGSPL_ERWCH	PROTEIN L	ERWINIA CHRYSANTHEMI	263-289								
PGSPL_XANCP	PROTEIN L	XANTHOMONAS CAMPESTRIS	7-42	248-284	331-358						
PGSPM_ERWCA	PROTEIN M	ERWINIA CAROTOVORA	30-73	297-324							
PGSQD_ERWCH	PROTEIN D PRECURSOR	ERWINIA CHRYSANTHEMI	108-145								
PGTF1_STRDO	GLUCOSYLTRANSFERASE-1 PRECURSOR	STREPTOCOCCUS DOWNEI	359-302	448-475	546-573	637-664					
PGTF2_STRDO	GLUCOSYLTRANSFERASE-2 PRECURSOR	STREPTOCOCCUS DOWNEI	42-69	177-204	212-239	464-491	1382-1416	1495-1529			
PGTFA_STRMU	GLUCOSYLTRANSFERASE-S	STREPTOCOCCUS MUTANS	171-198	206-233	458-485	1382-1412	1497-1524				
PGTFB_STRMU	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS MUTANS	297-350								
PGTFC_STRMU	GLUCOSYLTRANSFERASE-SI PRECURSOR	STREPTOCOCCUS MUTANS	42-93	110-137	161-188	199-246	313-367	592-627			
PGTFS_STRDO	GLUCOSYLTRANSFERASE-S PRECURSOR	STREPTOCOCCUS MUTANS	4-40	110-138	235-262	330-361	614-653				
PGTHR_METTF	POSSIBLE G-T MISMATCHES REPAIR ENZYME	METHANOBACTERIUM THERMOFORMICICUM	275-316	436-463	1281-1315						
PGUAA_BACSU	GMP SYNTHASE	BACILLUS SUBTILIS	80-107	148-175							
PGUAA_ECOLI	GMP SYNTHASE	ESCHERICHIA COLI	314-348	399-436	476-505						
PGUB_BACCI	BETA-GLUCANASE PRECURSOR	BACILLUS CIRCULANS	105-132								
PGUB_BACLI	BETA-GLUCANASE PRECURSOR	BACILLUS LICHENIFORMIS	164-191								
PGUB_BACMA	BETA-GLUCANASE PRECURSOR	BACILLUS MACERANS	132-166								
PGUN1_BACAM	ENDOGLUCANASE A	BACILLUS SP	126-160								
PGUN1_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	18-49								
PGUN1_BUTFI	ENDOGLUCANASE I	BUTYRIVIBRIO FIBRISOLVENS	276-304	378-403							
PGUN2_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	154-181	452-493							
PGUN3_THEFU	ENDOGLUCANASE E-3 PRECURSOR	THERMOMONOSPORA FUSCA	276-304								
PGUN3_BACAM	ENDOGLUCANASE C PRECURSOR	BACILLUS SP	201-228								
PGUN3_BACSU	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	110-137	348-378	538-565						
PGUN3_FIBSU	ENDOGLUCANASE J PRECURSOR	FIBROBACTER SUCCINOGENES	270-304								
PGUN4_THEFU	ENDOGLUCANASE E-4 PRECURSOR	THERMOMONOSPORA FUSCA	542-586								
PGUN5_THEFU	ENDOGLUCANASE E-5 PRECURSOR	THERMOMONOSPORA FUSCA	108-142								
PGUNA_BACLA	ENDOGLUCANASE A PRECURSOR	BACILLUS LAUTUS	44-71								
PGUNA_CLOTM	ENDOGLUCANASE A PRECURSOR	CLOSTRIDIUM THERMOCELLUM	410-437	454-481							
PGUNA_PSEFL	ENDOGLUCANASE A PRECURSOR	PSEUDOMONAS FLUORESCENS	334-384								
PGUNA_RUMAL	ENDOGLUCANASE A	RUMINOCOCCUS ALBUS	762-789								
PGUNA_RUMFL	CELLODEXTRINASE A	RUMINOCOCCUS FLAVEFACIENS	294-321								
PGUNB_BACLA	ENDOGLUCANASE B PRECURSOR	BACILLUS LAUTUS	276-303								
PGUNB_CALSA	ENDOGLUCANASE B	CALDOCELLUM SACCHAROLYTICUM	373-430								
PGUNB_CELFI	ENDOGLUCANASE B PRECURSOR	CELLULOMONAS FIMI	151-182	444-478							
PGUNB_CLOCL	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM CELLULOVORANS	266-293								
PGUNB_CLOTM	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM THERMOCELLUM	144-171	366-700							
PGUNC_CELFI	ENDOGLUCANASE C PRECURSOR	CELLULOMONAS FIMI	514-541								
PGUNC_PSEFL	ENDOGLUCANASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	881-908								
PGUND_CLOCE	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOLYTICUM	33-82								
PGUND_CLOCL	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOLYTICUM	182-453								
PGUNE_CLOTM	ENDOGLUCANASE E PRECURSOR	CLOSTRIDIUM THERMOCELLUM	145-172	271-298							
PGUNH_CLOTM	ENDOGLUCANASE H PRECURSOR	CLOSTRIDIUM THERMOCELLUM	158-185	207-234	284-311						
PGUNS_ERWCA	ENDOGLUCANASE PRECURSOR	ERWINIA CAROTOVORA	46-73	425-452							
PGUNX_CLOTM	PUTATIVE ENDOGLUCANASE X	CLOSTRIDIUM THERMOCELLUM	20-47	115-149							
PGUNZ_CLOSA	ENDOGLUCANASE Z PRECURSOR	CLOSTRIDIUM STERCORARIUM	105-139								
PGUN_BACPO	ENDOGLUCANASE	BACILLUS POLYMYXA	296-326	522-549							
PGUN_BACSI	ENDOGLUCANASE PRECURSOR	BACILLUS SP	198-225								
PGUN_BACSS	ENDOGLUCANASE PRECURSOR	BACILLUS SP	321-348								
			198-229	501-538	633-664						

PCGENE	[07:17]Tue	Prokaryotic Sequences								
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA3	AREA3	AREA1	AREA2	AREA1	AREA2
PGVTD_ECOLI	SORBITOL-6-PHOSPHATE 2-DEHYDROGENASE	ESCHERICHIA COLI	138-165								
PGVP1_HALHA	GAS VESICLE PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	36-63								
PGVP3_HALHA	GAS VESICLE PROTEIN, CHROMOSOMAL	HALOBACTERIUM HALOBIUM	36-63								
PGVP4_APHFL	GAS VESICLE PROTEIN	APHANIZOMENON FLOS-AQUAE	4-31	39-66							
PGVP4_FRED1	GAS VESICLE PROTEIN	FREMYELLA DIPLOSIPHON	4-31	39-66							
PGVP4_HALHA	GAS VESICLE PROTEIN	HALOBACTERIUM MEDITERRANEI	37-64								
PGVP4_MICBC	GAS VESICLE PROTEIN	MICROCYSTIS SP	39-66								
PGVP4_PSEAN	GAS VESICLE PROTEIN	PSEUDOANABAENA SP	4-31	39-66							
PGVPC_APHFL	GAS VESICLE PROTEIN C	APHANIZOMENON FLOS-AQUAE	8-49								
PGVPC_HALHA	GAS VESICLE PROTEIN C	HALOBACTERIUM HALOBIUM	150-249								
PGVPC_HALMA	GAS VESICLE PROTEIN C	HALOBACTERIUM MEDITERRANEI	139-169								
PGVPD_HALHA	GVPD PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	110-147								
PGVPD_HALME	GVPD PROTEIN	HALOBACTERIUM MEDITERRANEI	110-147								
PGVPF_HALHA	GVPF PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	13-47	133-169							
PGVPF_HALME	GVPF PROTEIN	HALOBACTERIUM MEDITERRANEI	13-47								
PGVPF_HALSA	GVPF PROTEIN	HALOBACTERIUM SALINARIUM	8-49								
PGVPO_HALHA	GVPO PROTEIN, PLASMID	HALOBACTERIUM HALOBIUM	18-65								
PGVPO_HALME	GVPO PROTEIN	HALOBACTERIUM MEDITERRANEI	38-72								
PGVPH_HALHA	GVPH PROTEIN	HALOBACTERIUM HALOBIUM	10-40								
PGVPI_HALME	GVPI PROTEIN	HALOBACTERIUM MEDITERRANEI	5-32								
PGVPK_HALHA	GVPK PROTEIN	HALOBACTERIUM HALOBIUM	45-76								
PGVPK_HALME	GVPK PROTEIN	HALOBACTERIUM MEDITERRANEI	12-39	47-74							
PGVPK_HALSA	GVPK PROTEIN	HALOBACTERIUM SALINARIUM	11-38	50-77							
PGVPL_HALME	GVPL PROTEIN	HALOBACTERIUM MEDITERRANEI	44-78								
PGVPN_HALHA	GVPN PROTEIN	HALOBACTERIUM HALOBIUM	111-140								
PGVPN_HALME	GVPN PROTEIN	HALOBACTERIUM MEDITERRANEI	15-56								
PGVPO_HALME	GVPO PROTEIN	HALOBACTERIUM MEDITERRANEI	69-96	105-133							
PGYRA_BACSU	DNA GYRASE SUBUNIT A	BACILLUS SUBTILIS	380-407	429-499							
PGYRA_CAMJE	DNA GYRASE SUBUNIT A	CAMPYLOBACTER JEJUNI	267-310	381-408	433-479	663-695					
PGYRA_ECOLI	DNA GYRASE SUBUNIT A	ESCHERICHIA COLI	266-293	449-497							
PGYRA_KLEPN	DNA GYRASE SUBUNIT A	KLEBSIELLA PNEUMONIAE	266-293	448-496	518-545						
PGYRA_MYCPN	DNA GYRASE SUBUNIT A	MYCOPLASMA PNEUMONIAE	4-31								
PGYRA_STAAU	DNA GYRASE SUBUNIT A	STAPHYLOCOCCUS AUREUS	129-156	346-373	430-479	647-674	812-839				
PGYRB_BACSU	DNA GYRASE SUBUNIT B	BACILLUS SUBTILIS	198-239								
PGYRB_BORBU	DNA GYRASE SUBUNIT B	BORRELIA BURGDORFERI	154-181								
PGYRB_ECOLI	DNA GYRASE SUBUNIT B	ESCHERICHIA COLI	616-643								
PGYRB_HALSQ	DNA GYRASE SUBUNIT B	HALOFERAX SP	210-237								
PGYRB_MYCPN	DNA GYRASE SUBUNIT B	MYCOPLASMA PNEUMONIAE	249-283								
PGYRB_NEIGO	DNA GYRASE SUBUNIT B	NEISSERIA GONORRHOEAE	524-558	618-645							
PGYRB_PSEPU	DNA GYRASE SUBUNIT B	PSEUDOMONAS PUTIDA	122-149	684-711							
PGYRB_SPICI	DNA GYRASE SUBUNIT B	SPIROPLASMA CITRI	40-74	189-238	283-310	341-368	540-579				
PGYRB_STAAU	DNA GYRASE SUBUNIT B	STAPHYLOCOCCUS AUREUS	252-279	291-318							
PHDHA_ECOLI	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	ESCHERICHIA COLI	71-98								
PHEL_ECOLI	HELICASE IV	ESCHERICHIA COLI	106-134	329-356							
PHEM1_CHLVI	LIPOPROTEIN E PRECURSOR	HAEMOPHILUS INFLUENZAE	58-85								
PHEM1_ECOLI	GLUTAMYL-TRNA REDUCTASE	CHLOROBIUM VIBRIOFORMES	232-259								
PHEM1_RHOSH	GLUTAMYL-TRNA REDUCTASE	ESCHERICHIA COLI	289-316								
PHEM1_SALTY	5-AMINOLEVULINIC ACID SYNTHASE	RHODOBACTER SPHAEROIDES	72-100								
PHEM1_SYNY3	GLUTAMYL-TRNA REDUCTASE	SALMONELLA TYPHIMURIUM	289-316	344-371							
PHEM2_METSC	GLUTAMYL-TRNA REDUCTASE	SYNECHOCYSTIS SP	163-190	350-377							
PHEM3_BACSU	DELTA-AMINOLEVULINIC ACID DEHYDRATASE	METHANOTHERMUS SOCIABILIS	131-158								
PHEM4_BACSU	PUTATIVE UROPORPHYRINOGEN-III SYNTHASE	BACILLUS SUBTILIS	10-37								
PHEM4_ECOLI	UROPORPHYRINOGEN-III SYNTHASE	ESCHERICHIA COLI	211-238								
PHEM4_ECOLI	HEMM PROTEIN	ESCHERICHIA COLI	147-174								
PHEM5_YEREN	HEMIN RECEPTOR PRECURSOR	YERSINIA ENTEROCOLITICA	234-261								
PHEMX_ECOLI	PUTATIVE METHYLTRANSFERASE	ESCHERICHIA COLI	69-138	185-219							
PHEMY_BACSU	HEMY PROTEIN	BACILLUS SUBTILIS	217-262								

PCGENE	19:17:14	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PHEM2_BACSU	FERROCHELATASE	BACILLUS SUBTILIS	199-236								
PHETA_ANASP	HETEROCYST DIFFERENTIATION PROTEIN	ANABAENA SP	184-211	337-398	521-563						
PHEXA_STRPN	DNA MISMATCH REPAIR PROTEIN HEXA	STREPTOCOCCUS PNEUMONIAE	416-460								
PHEXB_STRPN	DNA MISMATCH REPAIR PROTEIN HEXB	STREPTOCOCCUS PNEUMONIAE	470-497								
PHFAB_CAUCR	POS TRANSACTIVATOR PROTEIN HFAB	CAULOBACTER CRESCENTUS	98-125								
PHFLC_ECOLI	HFLC PROTEIN	ESCHERICHIA COLI	113-140								
PHFLX_ECOLI	GTP-BINDING PROTEIN HFLX	ESCHERICHIA COLI	169-196								
PHFQ_ECOLI	HOST FACTOR-I PROTEIN	ESCHERICHIA COLI	24-51								
PHIFC_HAEIN	PILLATION PROTEIN HIFC PRECURSOR	HAEMOPHILUS INFLUENZAE	356-383	404-431	447-474						
PHIS3_LACLA	PHOSPHORIBOSYL-ANP CYCLOHYDROLASE	LACTOCOCCUS LACTIS	126-174								
PHIS4_ECOLI	P-3-A CARBOXAMIDE RIBOTIDE	ESCHERICHIA COLI	125-159								
PHIS4_LACLA	P-3-A CARBOXAMIDE RIBOTIDE	LACTOCOCCUS LACTIS	49-89	181-228							
PHIS4_METVA	P-3-A CARBOXAMIDE RIBOTIDE	METHANOCOCCUS VANNIELII	115-142								
PHIS4_SALTY	P-3-A CARBOXAMIDE RIBOTIDE	SALMONELLA TYPHIMURIUM	125-159								
PHIS5_LACLA	AMIDOTRANSFERASE HIS5	LACTOCOCCUS LACTIS	7-34								
PHIS6_ECOLI	HISF PROTEIN	ESCHERICHIA COLI	39-66	142-169							
PHIS6_SALTY	HISF PROTEIN	SALMONELLA TYPHIMURIUM	39-66	142-169							
PHIS7_ECOLI	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	ESCHERICHIA COLI	168-199								
PHIS8_ECOLI	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	SALMONELLA TYPHIMURIUM	161-199								
PHIS9_HALVO	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	ESCHERICHIA COLI	298-317								
PHIS9_LACLA	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	HALOBACTERIUM VOLCANII	174-201								
PHIS9_SALTY	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	LACTOCOCCUS LACTIS	161-188								
PHISQ_SALTY	HISTIDINE PERMEASE MEMBRANE Q PROTEIN	SALMONELLA TYPHIMURIUM	297-320								
PHISX_ECOLI	HISTIDINOL DEHYDROGENASE	ESCHERICHIA COLI	8-35								
PHISX_LACLA	HISTIDINOL DEHYDROGENASE	LACTOCOCCUS LACTIS	393-434								
PHISX_MYCSM	HISTIDINOL DEHYDROGENASE	MYCOBACTERIUM SMEGMATIS	19-46	264-303							
PHISX_SALTY	HISTIDINOL DEHYDROGENASE	SALMONELLA TYPHIMURIUM	288-329	399-430							
PHLA_STAAU	ALPHA-HEMOLYSIN PRECURSOR	STAPHYLOCOCCUS AUREUS	393-434								
PHLY1_ECOLI	HEMOLYSIN A, CHROMOSOMAL	ESCHERICHIA COLI	69-103								
PHLY2_ECOLI	HAEMOLYSIN SECRETION PROTEIN, CHROMOSOMAL	ESCHERICHIA COLI	5-33	76-103	161-224	234-261	333-380	458-492	554-581	642-728	
PHLY4_ECOLI	HEMOLYSIN D, CHROMOSOMAL	ESCHERICHIA COLI	487-514								
PHLYA_ACTPL	HEMOLYSIN	ACTINOBACILLUS PLEUROPNEUMONIAE	103-133	178-215	222-331						
PHLYA_ACTSU	HEMOLYSIN	ACTINOBACILLUS SUIS	5-39	136-170	184-218	273-300	330-377	459-527	846-924		
PHLYA_ECOLI	HEMOLYSIN A, PLASMID	ESCHERICHIA COLI	5-39	136-170	184-218	273-300	330-377	459-500	846-924		
PHLYA_PROMI	HEMOLYSIN PRECURSOR	PROTEUS MIRABILIS	5-32	76-103	161-262	234-381	432-469	555-582	643-729		
			165-196	299-338	356-400	423-471	498-525	728-576	610-693	705-742	747-774
PHLYA_SERMA	HEMOLYSIN PRECURSOR	SERRATIA MARCESCENS	789-823	841-868	966-993	1113-1140	1166-1193	1235-1273	1301-1342	1391-1461	1482-1527
			311-343	477-504	558-585	623-701	718-745	830-864	1081-1108	1135-1202	1249-1286
PHLYB_VIBCH	HEMOLYSIN PRECURSOR	VIBRIO CHOLERAE	1516-1553								
PHLYB_ACTPL	HAEMOLYSIN SECRETION PROTEIN	ACTINOBACILLUS PLEUROPNEUMONIAE	335-369	638-665							
PHLYB_ECOLI	HAEMOLYSIN SECRETION PROTEIN, PLASMID	ESCHERICHIA COLI	34-61								
PHLYB_PROMI	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	PROTEUS MIRABILIS	487-514								
PHLYB_PROVU	HAEMOLYSIN SECRETION PROTEIN	PROTEUS VULGARIS	16-64	499-547							
PHLYB_SERMA	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	SERRATIA MARCESCENS	34-68	487-514							
PHLYB_VIBCH	HEMOLYSIN SECRETION PROTEIN PRECURSOR	VIBRIO CHOLERAE	110-137								
PHLYC_ACTPL	HEMOLYSIN C	ACTINOBACILLUS PLEUROPNEUMONIAE	335-398	413-447	458-524						
PHLYD_ACTPL	HEMOLYSIN SECRETION PROTEIN APPD	ACTINOBACILLUS PLEUROPNEUMONIAE	330-357								
PHLYD_ECOLI	HEMOLYSIN D, PLASMID	ESCHERICHIA COLI	191-331								
PHLY_HALLT	HALOLYSIN PRECURSOR	HALOPHILIC BACTERIA STRAIN 172P1	103-133	178-215	222-331						
PHMO_DESVH	47 KD PROTEIN IN HMC OPERON	DESULFOVIBRIO VULGARIS	484-516								
PHMD_METKA	HMD-FOLDING DEHYDROGENASE	METHANOPYRUS KANDLERI	156-186								
PHNS_SERMA	DNA-BINDING PROTEIN HNS	SERRATIA MARCESCENS	36-63								
PHOLA_ECOLI	DNA POLYMERASE III, DELTA SUBUNIT	ESCHERICHIA COLI	35-62								
PHOXA_BRAJA	REG PROTEIN HOXA	BRADYRHIZOBIUM JAPONICUM	94-121	288-322							
PHOXF_NOCOP	HOXS ALPHA SUBUNIT	NOCARDIA OPACA	117-163	444-471							
PHOXQ_ALCEU	HOXQ PROTEIN	ALCALIGENES EUTROPHUS	4-31								
			76-110								

PCGENE	1972171st	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA5	AREA6	AREA7	AREA8	AREA9
PHOX_BRAJA	HOXX PROTEIN	BRADYRHIZOBIUM JAPONICUM	336-381								
PHPI_DEIRA	HEXAGONALLY SURFACE PROTEIN PRECURSOR	DEINOCOCCUS RADIODURANS	585-611								
PHPRT_LACLA	PHOSPHORIBOSYLTRANSFERASE	LACTOCOCCUS LACTIS	339	71-105							
PHUDO_STRCO	SIGMA FACTOR HUDO	STREPTOMYCES COELICOLOR	296-323								
PHUFB_BURSO	REGULATORY PROTEIN HUFB	BURKHOLDERIA SOLANACEARUM	371-401								
PHUPH_PSESY	OUTER MEMBRANE PROTEIN HUPH PRECURSOR	PSEUDOMONAS SYRINGAE	102-129	310-344							
PHUPS_PSESH	PROBABLE REGULATORY PROTEIN HUPS	PSEUDOMONAS SYRINGAE	24-51								
PHSH8_CLOAB	18 KD HEAT SHOCK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	87-108								
PHSH0_HALMA	HEAT SHOCK 70 KD PROTEIN	HALOARCULA MARISMORTUI	432-476								
PHSH0_MYCLE	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM LEPRAE	461-488	511-540							
PHSH0_MYCPA	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM PARATUBERCULOSIS	460-487								
PHTPO_ECOLI	HEAT SHOCK PROTEIN C62.5	ESCHERICHIA COLI	521-548	482-509							
PHTRA_ECOLI	PROTEASE DO PRECURSOR	ESCHERICHIA COLI	373-400								
PHTRE_ECOLI	HTRE PROTEIN PRECURSOR	ESCHERICHIA COLI	434-464	524-556							
PHTRU_HALMA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM HALOBIUM	413-471	479-506							
PHTRU_HALSA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM SALINARIUM	114-169	411-441	479-506						
PIUTP_BACSU	IIUT OPERON POSITIVE REGULATORY PROTEIN	BACILLUS SUBTILIS	5-36								
PHYTJ_LACDE	HELVETICIN J	LACTOBACILLUS HELVETICUS	174-213	306-333							
PHYCA_ECOLI	FORMATE HYDROGENLYASE SUBUNIT 1	ESCHERICHIA COLI	71-100	106-133							
PHYDO_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	ESCHERICHIA COLI	331-358								
PHYDO_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	SALMONELLA TYPHIMURIUM	133-160	297-331							
PHYDH_ECOLI	SENSOR PROTEIN HYDH	ESCHERICHIA COLI	231-278								
PHYUB_PSESN	HYDANTOIN UTILIZATION PROTEIN B	PSEUDOMONAS SP	312-339	360-387							
PHYUC_PSESN	HYDANTOIN UTILIZATION PROTEIN	PSEUDOMONAS SP	534-581								
PIAAL_PSEES	DIDEOXYACETATE-LYSINE LIGASE	PSEUDOMONAS SYRINGAE	6-40	96-123							
PIAP_ECOLI	ALK PHOS ISOZYME CONVERSION PROTEIN	ESCHERICHIA COLI	133-160	297-331							
PICEN_ERWAN	ICE NUCLEATION PROTEIN	ERWINIA ANANAS	74-101								
			326-353	422-449	524-561	614-641	662-689	721-748	758-785	854-881	930-977
			1046-1073								
PICEN_ERWHE	ICE NUCLEATION PROTEIN	ERWINIA HERBICOLA	310-337	406-433	524-561	646-673	694-721	838-865	886-913	982-1009	
PICEN_PSEFL	ICE NUCLEATION PROTEIN	PSEUDOMONAS FLUORESCENS	281-308	377-404	423-452	681-708	729-781	793-852			
PICEN_PSESY	ICE NUCLEATION PROTEIN	PSEUDOMONAS SYRINGAE	364-602	772-847	868-895	909-943					
PICEN_XANCT	ICE NUCLEATION PROTEIN	XANTHOMONAS CAMPESTRIS	496-534	535-582	1168-1204	1248-1275					
PICSB_SHIFL	ENTEROCELLULAR SPREAD PROTEIN	SHIGELLA FLEXNERI	41-105	418-467							
PIF1_BACST	INITIATION FACTOR IF-2	BACILLUS STEAROTHERMOPHILUS	540-567	681-708							
PIF1_BACSU	INITIATION FACTOR IF-2	BACILLUS SUBTILIS	173-208	394-421							
PIF1_ECOLI	INITIATION FACTOR IF-2	ESCHERICHIA COLI	686-724	835-862							
PIF1_ENTFC	INITIATION FACTOR IF-2	ENTEROCOCCUS FAECIUM	579-617								
PIF1_BACST	INITIATION FACTOR IF-2	BACILLUS STEAROTHERMOPHILUS	7-34								
PIF1_ECOLI	INITIATION FACTOR IF-3	ESCHERICHIA COLI	27-54	70-97							
PIF1_KLEPN	INITIATION FACTOR IF-3	KLEBSIELLA PNEUMONIAE	27-54	70-97							
PIF1_MYCPE	INITIATION FACTOR IF-3	MYCOPLASMA FERMENTANS	177-211								
PIF1_PROVU	INITIATION FACTOR IF-3	PROTEUS VULGARIS	2-30	70-97							
PIF1_SALTY	INITIATION FACTOR IF-3	SALMONELLA TYPHIMURIUM	27-54	70-97							
PIF1_SERMA	INITIATION FACTOR IF-3	SERRATIA MARCESCENS	19-46	70-97							
PIGA_NEIGO	IGA-SPECIFIC SERINE ENDOPEPTIDASE	NEISSERIA GONORRHOEAE	245-272	287-314	833-860	1024-1051	1377-1404	1483-1511			
PIGGB_STRSP	IGG BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	195-222						
PIGGG_STRSP	IGG BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	195-223	270-297					
PILVH_ECOLI	ACETOLACTATE SYNTHASE	ESCHERICHIA COLI	47-81	120-147							
PILVH_SALTY	ACETOLACTATE SYNTHASE	SALMONELLA TYPHIMURIUM	47-81	120-147							
PILVH_LACLA	ACETOLACTATE SYNTHASE	LACTOCOCCUS LACTIS	20-73								
PIMPB_SALTY	IMPB PROTEIN	SALMONELLA TYPHIMURIUM	185-212								
PINO_ACICA	INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE	ACINETOBACTER CALCOACETICUS	166-193								
PINO_BACSU	E.5'-MONOPHOSPHATE DEHYDROGENASE	BACILLUS SUBTILIS	159-186								
PINA_BACTL	IMMUNE INHIBITOR A PRECURSOR	BACILLUS THURINGIENSIS	101-130	324-358							
PINLA_LISMO	INTERNALIN A	LISTERIA MONOCYTOGENES	106-143	161-188	196-232						
PINLB_LISMO	INTERNALIN B PRECURSOR	LISTERIA MONOCYTOGENES	53-94	166-200	383-415						
PINVA_YEREN	INVASIN	YERSINIA ENTEROCOLITICA	501-535								

PCGENE	107a178a4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PIPA7_SHIFL	60 KD ANTIGEN	SHIGELLA FLEXNERI	285-312								
PIPAA_SHIFL	70 KD ANTIGEN	SHIGELLA FLEXNERI	95-136	437-475	493-557	596-630					
PIPAB_SHIDY	62 KD MEMBRANE ANTIGEN	SHIGELLA DYSENTERIAE	28-55	71-169	480-507	522-556					
PIPAB_SHIFL	62 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	28-55	71-169	480-507	522-556					
PIPAC_SHIDY	42 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA DYSENTERIAE	21-57	113-161	273-300	324-378					
PIPAC_SHIFL	42 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA FLEXNERI	28-57	113-161	273-300	324-372					
PIPAD_SHIDY	37 KD MEMBRANE ANTIGEN IPAD	SHIGELLA DYSENTERIAE	47-86	291-318							
PIPAD_SHIFL	36 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	47-86	259-286	291-318						
PIPGB_SHIDY	IPGB PROTEIN	SHIGELLA DYSENTERIAE	175-202								
PIPGB_SHIFL	IPGB PROTEIN	SHIGELLA FLEXNERI	175-202								
PIPT_PSESS	ISOPENTENYL TRANSFERASE	PSEUDOMONAS SYRINGAE	53-87	143-173							
PIPYR_ECOLI	INORGANIC PYROPHOSPHATASE	ESCHERICHIA COLI	138-172								
PIRGA_VIBCH	VIRULENCE PROTEIN PRECURSOR	VIBRIO CHOLERAE	212-239	336-377							
PIRGB_VIBCH	VIRULENCE REGULATORY PROTEIN IRGB	VIBRIO CHOLERAE		67-97							
PIRPA_SYNP7	IRON-REGULATED PROTEIN A	SYNECHOCOCCUS SP	167-194								
PISBD_SHIDY	INSERTION ELEMENT ISO-ISID PROTEIN INSB	SHIGELLA DYSENTERIAE	86-113								
PISBN_SHIDY	INSERTION ELEMENT ISO-ISIN PROTEIN INSB	SHIGELLA DYSENTERIAE	6-37								
PISB_ECOLI	INSERTION ELEMENT IS1 PROTEIN INSB	ESCHERICHIA COLI	122-149								
PISB_SHIFL	INSERTION ELEMENT IS1 PROTEIN INSB	SHIGELLA FLEXNERI	86-113								
PISB_SHISO	INSERTION ELEMENT IS1 PROTEIN INSB	SHIGELLA SONNEI	86-113								
PISP1_BACSU	MAJOR INTRACELLULAR SERINE PROTEASE	BACILLUS SUBTILIS	115-142	197-224	253-280						
PISP_BACPO	INTRACELLULAR SERINE PROTEASE	BACILLUS POLYMYXA	109-143								
PISTA_ECOLI	ISTA PROTEIN	ESCHERICHIA COLI	183-210								
PISTA_SHISO	ISTA PROTEIN	SHIGELLA SONNEI	183-210								
PIUTA_ECOLI	FERRIC AEROBACTIN RECEPTOR PRECURSOR	ESCHERICHIA COLI	186-213	525-552	559-593						
PJAG_BACSU	JAG PROTEIN	BACILLUS SUBTILIS	68-95								
PK6P2_ECOLI	6-PHOSPHOFRUCTOKINASE ISOZYME 2	ESCHERICHIA COLI	143-170								
PKAD_BACSU	ADENYLATE KINASE	BACILLUS SUBTILIS	188-215								
PKAD_LACLA	ADENYLATE KINASE	LACTOCOCCUS LACTIS	186-213								
PKANU_BACSP	KANAMYCIN NUCLEOTIDYLTRANSFERASE	BACILLUS SP	69-96								
PKANU_STAAU	KANAMYCIN NUCLEOTIDYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	69-96								
PKDGT_ECOLI	2-KETO-3-DEOXYGLUCONATE PERMEASE	ESCHERICHIA COLI	70-97								
PKDGT_ERWCH	2-KETO-3-DEOXYGLUCONATE PERMEASE	ERWINIA CHRYSANTHEMI	126-153								
PKDTA_ECOLI	3-DEOXY-D-MANNO-OCTULOSONIC-ACID TRANS	ESCHERICHIA COLI	369-396								
PKGTP_ECOLI	ALPHA-KETOGLUTARATE PERMEASE	ESCHERICHIA COLI	7-34								
PKGUA_ECOLI	GUANYLATE KINASE	ESCHERICHIA COLI	162-189								
PKHSE_BACSU	HOMOSERINE KINASE	BACILLUS SUBTILIS	49-76								
PKHSE_FREDI	HOMOSERINE KINASE	FREMYELLA DIPLOSIPHON	52-79								
PKKA4_BACCI	AMINOGLYCOSIDE 3'-PHOSPHOTRANSFERASE	BACILLUS CIRCULANS	12-39								
PKORB_ECOLI	KORB TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	228-255								
PKPY1_SPICI	PYRUVATE KINASE	SPIROPLASMA CITRI	112-148								
PKPYK_BACST	PYRUVATE KINASE	BACILLUS STEAROTHERMOPHILUS	331-374								
PLACA_STAAU	ISOMERASE LACA SUBUNIT	STAPHYLOCOCCUS AUREUS	9-64								
PLACA_STRMU	ISOMERASE LACA SUBUNIT	STREPTOCOCCUS MUTANS	26-60								
PLACC_STRMU	TAGATOSE-6-PHOSPHATE KINASE	STREPTOCOCCUS MUTANS	56-83	283-310							
PLACG_LACCA	6-PHOSPHO-BETA-GALACTOSIDASE	LACTOBACILLUS CASEI	290-317								
PLACI_ECOLI	LACTOSE OPERON REPRESSOR	ESCHERICHIA COLI	9-36								
PLACI_KLEPN	LACTOSE OPERON REPRESSOR	KLEBSIELLA PNEUMONIAE	195-229								
PLACR_STAAU	PHOSPHOTRANSFERASE REPRESSOR	STAPHYLOCOCCUS AUREUS	2-29								
PLACR_STRMU	PHOSPHOTRANSFERASE REPRESSOR	STREPTOCOCCUS MUTANS	2-32								
PLACY_LACDE	LACTOSE PERMEASE	LACTOBACILLUS DELBRUECKII	196-230								
PLAFB_VIBPA	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	VIBRIO PARAHAEMOLYTICUS	62-89	388-415							
PLAMB_KLEPN	MALTOPORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	337-364								
PLAN1_CLOTM	ENDO-1,3(4)-BETA-GLUCANASE PRECURSOR	CLOSTRIDIUM THERMOCELLUM	132-159								
PLASI_PSEAE	OHHL SYNTHESIS PROTEIN LASI	PSEUDOMONAS AERUGINOSA	171-198								
PLCCI_LEUGE	PROBABLE LEUCOCIN A IMMUNITY PROTEIN	LEUCONOSTOC GELIDUM	41-71								
PLCNC_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCNC	LACTOCOCCUS LACTIS	162-189	207-234	388-433						

PCGENE	Identified	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PLCND_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCND	LACTOCOCCUS LACTIS	99-126	140-202	233-307					
PLCRD_YEREN	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA ENTEROCOLITICA	122-149	491-518						
PLCRD_YERPE	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA PESTIS	122-149	491-518						
PLCV_YERPB	VIRULENCE-ASSOCIATED V ANTIGEN	YERSINIA PESTIS	22-49	157-184	240-267					
PLCV_YERPS	VIRULENCE-ASSOCIATED V ANTIGEN	YERSINIA PSEUDOTUBERCULOSIS	22-49	240-267						
PLCTB_BACCA	LCTB PROTEIN	BACILLUS CALDOTENAX	18-45							
PLCTB_BACST	LCTB PROTEIN	BACILLUS STEAROTHERMOPHILUS	14-45							
PLDHD_LACPL	D-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	31-81							
PLDHP_BACP3	L-LACTATE DEHYDROGENASE P	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-272	279-306					
PLDHX_BACP3	L-LACTATE DEHYDROGENASE X	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-273	279-306					
PLDH_BACME	L-LACTATE DEHYDROGENASE	BACILLUS MEGATERIUM	244-274							
PLDH_BACST	L-LACTATE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	241-268	279-313						
PLDH_BACSU	L-LACTATE DEHYDROGENASE	BACILLUS SUBTILIS	8-41	240-267						
PLDH_BIFLO	L-LACTATE DEHYDROGENASE	BIFIDOBACTERIUM LONGUM	22-49							
PLDH_LACPL	L-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	197-231							
PLDH_LISMO	L-LACTATE DEHYDROGENASE	LISTERIA MONOCYTOGENES	42-69							
PLDH_MYCHY	L-LACTATE DEHYDROGENASE	MYCOPLASMA HYOPNEUMONIAE	276-310							
PLDH_THEAQ	L-LACTATE DEHYDROGENASE	THERMUS AQUATICUS	3-30							
PLEF_BACAN	LETHAL FACTOR PRECURSOR	BACILLUS ANTHRACIS	165-192	304-331	480-514	548-578	619-658	737-764		
PLEPA_PSEFL	LEPA PROTEIN	PSEUDOMONAS FLUORESCENS	23-50							
PLEP_BACSU	SIGNAL PEPTIDASE I	BACILLUS SUBTILIS	3-30							
PLEU1_ECOLI	2-ISOPROPYLMALATE SYNTHASE	ESCHERICHIA COLI	437-464							
PLEU1_LACLA	2-ISOPROPYLMALATE SYNTHASE	LACTOCOCCUS LACTIS	22-49	379-484						
PLEU1_BACCO	3-ISOPROPYLMALATE DEHYDROGENASE	BACILLUS COAGULANS	331-358							
PLEU1_CLOPA	3-ISOPROPYLMALATE DEHYDROGENASE	CLOSTRIDIUM PASTEURIANUM	185-212							
PLEU1_LACLA	3-ISOPROPYLMALATE DEHYDRATASE	LACTOCOCCUS LACTIS	161-190							
PLEVR_BACSU	TRANSCRIPTIONAL REGULATORY PROTEIN LEVR	BACILLUS SUBTILIS	297-324	676-703	744-774	785-823				
PLEXA_ERWCA	LEXA REPRESSOR	ERWINIA CAROTOVORA	146-173							
PLIP1_MORSP	LIPASE 1	MORAXELLA SP	26-53							
PLIP2_MORSP	LIPASE 2	MORAXELLA SP	356-383							
PLIPB_ECOLI	LIPB PROTEIN	ESCHERICHIA COLI	66-93							
PLIP_BURCE	LIPASE PRECURSOR	BURKHOLDERIA CEPACIA	176-203							
PLIP_PSEFL	LIPASE PRECURSOR	PSEUDOMONAS FLUORESCENS	8-35							
PLIP_PSES3	LIPASE PRECURSOR	PSEUDOMONAS SP	176-203							
PLIP_STAAU	LIPASE PRECURSOR	STAPHYLOCOCCUS AUREUS	80-146	512-546						
PLIVB_SALTY	LEUTLE/VAL/THR-BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	193-220							
PLIVC_SALTY	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	195-222							
PLIVE_SALTY	AMINO ACID TRANSPORT PROTEIN LIVE	SALMONELLA TYPHIMURIUM	121-148							
PLIVE_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVE	ESCHERICHIA COLI	23-50							
PLIVJ_CITFR	LEUTLE/VAL-BINDING PROTEIN PRECURSOR	CITROBACTER FREUNDII	195-222							
PLIVJ_ECOLI	LEUTLE/VAL-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222							
PLIVK_ECOLI	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222							
PLIVM_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVM	ESCHERICHIA COLI	121-148							
PLKTA_ACTAC	LEUKOTOXIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	113-147	171-213	398-443	451-488	593-630	655-711		
PLKTA_PASHA	LEUKOTOXIN	PASTEURELLA HAEMOLYTICA	53-99	179-216	345-372	409-436	455-482	496-530	545-572	811-838
PLKTB_ACTAC	LEUKOTOXIN SECRETION PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	487-514							853-926
PLKTB_PASHA	LEUKOTOXIN SECRETION PROTEIN	PASTEURELLA HAEMOLYTICA	43-69	78-105	488-515					
PLKTC_ACTAC	LKTC PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	58-85	116-150						
PLKTC_PASHA	LKTC PROTEIN	PASTEURELLA HAEMOLYTICA	123-157							
PLKTD_ACTAC	LKTD PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	116-164	205-242	278-305	364-391				
PLKTD_PASHA	LKTD PROTEIN	PASTEURELLA HAEMOLYTICA	184-289							
PLON_ECOLI	ATP-DEPENDENT PROTEASE LA	ESCHERICHIA COLI	121-148							
PLPXA_RICPR	UDP-N-ACETYLGLUCOSAMINE ACYLTRANSFERASE	RICKETTSIA RICKETTSII	229-256							
PLSPA_ECOLI	LIPOPROTEIN SIGNAL PEPTIDASE	ESCHERICHIA COLI	10-37							
PLSPA_STAAU	LIPOPROTEIN SIGNAL PEPTIDASE	STAPHYLOCOCCUS AUREUS	134-161							
PLTRF_STAAU	LEUKOCIDIN F SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	181-195							
PLTRS_STAAU	LEUKOCIDIN S SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	157-207							

BAD ORIGINAL

PCGENE	1072178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PLUXA_KRYAL	ALKANAL MONOOXYGENASE ALPHA CHAIN	KRYPTOPHANARON ALFREDI	190-217								
PLUXB_PHOPO	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM PHOSPHOREUM	188-217	257-291							
PLUXB_VIBHA	ALKANAL MONOOXYGENASE BETA CHAIN	VIBRIO HARVEYI	373-400								
PLUXC_PHOLE	ACYL-COA REDUCTASE	PHOTOBACTERIUM LEIOGNATHI	44-81								
PLUXC_PHOPO	ACYL-COA REDUCTASE	PHOTOBACTERIUM PHOSPHOREUM	54-91								
PLUXC_VIBFI	ACYL-COA REDUCTASE	VIBRIO FISCHERI	16-65								
PLUXC_XENLU	ACYL-COA REDUCTASE	XENORHABDUS LUMINESCENS	39-69								
PLUXD_PHOLE	ACYL TRANSFERASE	PHOTOBACTERIUM LEIOGNATHI	89-119	218-243							
PLUXE_VIBHA	LUCIFERIN-COMPONENT LIGASE	VIBRIO HARVEYI	30-57								
PLUXF_PHOLE	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM LEIOGNATHI	145-172								
PLUXF_PHOPO	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM PHOSPHOREUM	37-85	99-126							
PLUXG_VIBFI	PROBABLE FLAVIN REDUCTASE	VIBRIO FISCHERI	137-168								
PLUXH_VIBHA	LUXH PROTEIN	VIBRIO HARVEYI	96-123								
PLUXI_VIBFI	OHHL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-58								
PLUXJ_VIBFI	OHHL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-57								
PLUXP_PHOPO	LUMAZINE PROTEIN	PHOTOBACTERIUM PHOSPHOREUM	51-85	162-189							
PLUXR_VIBHA	LUXR REGULATORY PROTEIN	VIBRIO HARVEYI	61-88								
PLXB1_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	268-295								
PLXB2_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	228-255								
PLYB_BACSU	B-ENZYME	BACILLUS SUBTILIS	87-114								
PLYC_CLOAB	AUTOLYTIC LYSOZYME	CLOSTRIDIUM ACETOBUTYLICUM	91-118								
PLYSP_ECOLI	LYSINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	142-176								
PLYTB_BACSU	AMIDASE ENHANCER PRECURSOR	BACILLUS SUBTILIS	55-82	150-177	467-513	555-585					
PLYTB_ECOLI	LYTB PROTEIN	ESCHERICHIA COLI	210-237								
PLYTC_BACSU	AMIDASE PRECURSOR	BACILLUS SUBTILIS	179-213	225-252							
PLYTR_BACSU	MEMBRANE-BOUND PROTEIN LYTR	BACILLUS SUBTILIS	13-64	259-303							
PM12_STRPY	M PROTEIN, SEROTYPE 12 PRECURSOR	STREPTOCOCCUS PYOGENES	46-92	114-156	191-300	305-342	383-417	436-494			
PM24_STRPY	M PROTEIN, SEROTYPE 24 PRECURSOR	STREPTOCOCCUS PYOGENES	12-46	89-128	175-202	245-272	280-313	399-457			
PM49_STRPY	M PROTEIN, SEROTYPE 49 PRECURSOR	STREPTOCOCCUS PYOGENES	12-174	269-327							
PM5_STRPY	M PROTEIN, SEROTYPE 5 PRECURSOR	STREPTOCOCCUS PYOGENES	5-39	56-263	306-333	352-410					
PM6_STRPY	M PROTEIN, SEROTYPE 6 PRECURSOR	STREPTOCOCCUS PYOGENES	12-39	70-282	290-324	343-401					
PMALE_ECOLI	MALTOSE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	20-47								
PMALE_ENTAE	MALTOSE-BINDING PROTEIN PRECURSOR	ENTEROBACTER AEROGENES	20-47								
PMALK_ENTAE	INNER MEMBRANE PROTEIN MALK	ENTEROBACTER AEROGENES	3-30								
PMALT_ECOLI	MALT REGULATORY PROTEIN	ESCHERICHIA COLI	852-879								
PMALX_STRPN	MALX PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	40-67	180-207							
PMANB_BACSU	1,4-BETA-MANNOSIDASE A AND B PREC	BACILLUS SP	410-441								
PMANB_CALSA	B-MANNANASE/ENDOGLUCANASE A PREC	CALDOCELLUM SACCHAROLYTICUM	389-423	592-626	1222-1256	1296-1323					
PMAOX_BACST	MALATE OXIDOREDUCTASE	BACILLUS STEAROTHERMOPHILUS	246-273								
PMARR_ECOLI	ANTIBIOTIC RESISTANCE PROTEIN MARR	ESCHERICHIA COLI	95-122								
PMBEB_ECOLI	MOBILIZATION PROTEIN MBEB	ESCHERICHIA COLI	38-65	100-134							
PMHHB_WOLSU	QUINONE-REAC NIFE-HYDROGENASE	WOLINELLA SUCCINOGENES	440-471								
PMCBB_ECOLI	MCBB PROTEIN	ESCHERICHIA COLI	47-74	122-163							
PMCBD_ECOLI	MCBD PROTEIN	ESCHERICHIA COLI	172-206	226-253	306-345						
PMCP1_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN I	ESCHERICHIA COLI	272-299								
PMCP2_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	ESCHERICHIA COLI	258-306								
PMCP2_SALTY	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	SALMONELLA TYPHIMURIUM	258-306								
PMCP3_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN III	ESCHERICHIA COLI	288-315								
PMCP4_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN IV	ESCHERICHIA COLI	111-145	164-191	277-304						
PMCPA_CAUCR	CHEMORECEPTOR MCPA	CAULOBACTER CRESCENTUS	260-287	369-403	516-543						
PMCPC_SALTY	CHEMOTAXIS CITRATE TRANSDUCER	SALMONELLA TYPHIMURIUM	314-348								
PMCPD_ENTAE	CHEMOTAXIS ASPARTATE TRANSDUCER	ENTEROBACTER AEROGENES	275-302								
PMCPS_ENTAE	CHEMOTAXIS SERINE TRANSDUCER	ENTEROBACTER AEROGENES	41-68	158-208	317-351	488-522					
PMCRA_ECOLI	SPECIFIC RESTRICTION ENZYME A	ESCHERICHIA COLI	37-71								
PMCRA_METBA	METHYL-COENZYME M REDUCTASE	METHANOSARCINA BARKERI	375-405								
PMCRA_METVA	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VANNIELII	335-362								
PMCRA_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	336-363								

BAD ORIGINAL

PCGENE	10?s178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA3	AREA4	AREA5	AREA1	AREA1	AREA3
PMCMB_METFE	METHYL-COENZYME M REDUCTASE	METHANOTHERMUS FERVIDUS	267-294								
PMCRB_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	247-274								
PMCRC_ECOLI	MCRC PROTEIN	ESCHERICHIA COLI	111-145								
PMCRD_METVO	REDUCTASE OPERON PROTEIN D	METHANOCOCCUS VOLTAE	34-91								
PMDH_ECOLI	MALATE DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PMDH_METFE	MALATE DEHYDROGENASE	METHANOTHERMUS FERVIDUS	34-88								
PMDH_SALTY	MALATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	127-154								
PMDL_ECOLI	MDL PROTEIN	ESCHERICHIA COLI	404-491	684-711	992-1019						
PMDOH_ECOLI	BIOSYNTHESIS PROTEIN MDOH	ESCHERICHIA COLI	119-152								
PMECI_STAEP	METHICILLIN RESIS NEG PROTEIN MECI	STAPHYLOCOCCUS EPIDERMIDIS & AUREUS	88-122								
PMECR_STAEP	METHICILLIN RESISTANCE MECR1 PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS & AUREUS	439-495	546-573							
PMEMB_METCA	METHANE MONOOXYGENASE COMPONENT A	METHYLOCOCCUS CAPSULATUS	214-248								
PMEMB_METTR	METHANE MONOOXYGENASE COMPONENT A	METHYLOSINUS TRICHOSPORIUM	321-348								
PMEMD_ECOLI	SHCHC SYNTHASE	ESCHERICHIA COLI	333-367								
PMER_STRLI	PROBABLE HG TRANSPORT PROTEIN	STREPTOMYCES LIVIDANS	159-186								
PMERA_BACSR	MERCURIC REDUCTASE	BACILLUS SP	146-180								
PMERA_STAAU	MERCURIC REDUCTASE	STAPHYLOCOCCUS AUREUS	292-347	352-386							
PMERA_STAAU	MERCURIC RESISTANCE OPERON REG PROTEIN	STAPHYLOCOCCUS AUREUS	86-113								
PMETB_ECOLI	CYSTATHIONINE GAMMA-SYNTHASE	ESCHERICHIA COLI	336-383								
PMETC_ECOLI	CYSTATHIONINE BETA-LYASE	ESCHERICHIA COLI	363-390								
PMETC_SALTY	CYSTATHIONINE BETA-LYASE	SALMONELLA TYPHIMURIUM	2-29								
PMETE_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	448-482								
PMETH_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	371-398	642-676							
PMFD_ECOLI	TRANSCRIPTION-REPAIR COUPLING FACTOR	ESCHERICHIA COLI	185-212								
PMGLA_ECOLI	GALACTOSIDE-BINDING PROTEIN	ESCHERICHIA COLI	62-89	312-380							
PMINC_BACSU	SEPTUM SITE-DETERMINING PROTEIN MINC	BACILLUS SUBTILIS	63-122								
PMIOC_ECOLI	MIOC PROTEIN	ESCHERICHIA COLI	102-139								
PMIP_CHLTR	27 KD MEMBRANE PROTEIN PRECURSOR	CHLAMYDIA TRACHOMATIS	41-75								
PMIP_LEGMI	OUTER MEMBRANE PROTEIN MIP PRECURSOR	LEGIONELLA MICDADEI	106-133								
PMLS1_ENTFA	RNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLS1_STAAU	RNA ADENINE N-6-METHYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	9-47								
PMLS1_ENTFA	RNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLSB_BACFR	RNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMLSB_ECOLI	RNA ADENINE N-6-METHYLTRANSFERASE	ESCHERICHIA COLI	4-81	120-154							
PMLSD_STRPN	RNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS PNEUMONIAE	4-81	120-154							
PMLSB_STRSA	RNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS SANGUIS	4-81	120-154							
PMLSC_BACFR	RNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMMOI_METC	METHANE MONOOXYGENASE REG PROTEIN II	METHYLOCOCCUS CAPSULATUS	34-64								
PMOAB_ECOLI	MOLYBD COFAC BIOSYN PROTEIN B	ESCHERICHIA COLI	49-76								
PMOBA_THIFE	MOBA PROTEIN	THIOBACILLUS FERROOXIDANS	94-131	231-278							
PMOBC_THIFE	MOBC PROTEIN	THIOBACILLUS FERROOXIDANS	20-47								
PMOBD_THIFE	MOBD PROTEIN	THIOBACILLUS FERROOXIDANS	93-132								
PMOB_ECOLI	MOB PROTEIN	ESCHERICHIA COLI	43-72								
PMOEA_ECOLI	MOLYBDOPTERIN BIOSYNTHESIS MOEA PROTEIN	ESCHERICHIA COLI	243-270								
PMOP1_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN I	CLOSTRIDIUM PASTEURIANUM	26-53								
PMOP2_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN II	CLOSTRIDIUM PASTEURIANUM	26-64								
PMOXY_PARDE	METHANOL UTIL CONT PROTEIN MOXY	PARACOCCUS DENITRIFICANS	200-234	307-334							
PMPEU_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEU	SYNECHOCOCCUS SP	2-36	80-107	198-225						
PMPEV_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEV	SYNECHOCOCCUS SP	2-31	175-216							
PMPRA_ECOLI	MPRA PROTEIN	ESCHERICHIA COLI	136-163								
PMRAT_BACSU	PENTAPEPTIDE-TRANSFERASE	BACILLUS SUBTILIS	106-133	247-281							
PMREB_BACCE	ROD SHAPE-DETERMINING PROTEIN MREB	BACILLUS CEREUS	116-143								
PMREC_BACSU	ROD SHAPE-DETERMINING PROTEIN MREC	BACILLUS SUBTILIS	65-112								
PMRKB_KLEPN	CHAPERONE PROTEIN MRKB PRECURSOR	KLEBSIELLA PNEUMONIAE	198-232								
PMRKC_KLEPN	MRKC PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	55-82	453-489	592-632						

BAD ORIGINAL

PCGENE	1972:1784	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PMUKD_KLEPN	FIMBRIA ADHESIN PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	222-264								
PMORE_KLEPN	MORE PROTEIN	KLEBSIELLA PNEUMONIAE	193-220								
PMUP4_STRPY	FIBRINOGEN-/IG-BINDING PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	7-46	99-110							
PMUP_STRSU	MURAMIDASE-RELEASED PROTEIN PRECURSOR	STREPTOCOCCUS SUIS	35-102	130-177	261-291	421-448	507-534	588-622	773-800	1018-1083	
PMSBA_ECOLI	PROB ATP-BINDING TRANSPORT PROTEIN MSBA	ESCHERICHIA COLI	116-150	412-449							
PMSRA_STAEP	ERYTHROMYCIN RESISTANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	174-223	333-350							
PMSYB_ECOLI	ACIDIC PROTEIN MSYB	ESCHERICHIA COLI	33-100								
PMT37_ECOLI	MODIFICATION METHYLASE ECO37I	ESCHERICHIA COLI	250-284	474-544							
PMTAI_ACICA	MODIFICATION METHYLASE ACCI	ACINETOBACTER CALCOACETICUS	503-540								
PMTAB_SYNP2	MODIFICATION METHYLASE AQUI BETA SUBUNIT	SYNECHOCOCCUS SP	19-46								
PMTB1_BREEP	MODIFICATION METHYLASE BEPI	BREVIBACTERIUM EPIDERMIDIS	166-200	309-336							
PMTB1_HERAU	MODIFICATION METHYLASE HGIBI	HERPETOSIPHON AURANTIACUS	281-308								
PMTB1_BACAM	MODIFICATION METHYLASE BAMHII	BACILLUS AMYLOLIQUEFACIENS	35-82								
PMTB1_BACAX	MODIFICATION METHYLASE BANIII	BACILLUS ANEURINOLYTICUS	184-211								
PMTBA_BACAX	MODIFICATION METHYLASE BANI	BACILLUS ANEURINOLYTICUS	121-148	382-409							
PMTBB_BACSU	MODIFICATION METHYLASE BSUBI	BACILLUS SUBTILIS	211-238	467-496							
PMTBF_BACSU	MODIFICATION METHYLASE BSUFI	BACILLUS SUBTILIS	208-235								
PMTC1_CITFR	MODIFICATION METHYLASE CFRBI	CITROBACTER FREUNDII	2-36	55-82	232-279						
PMTC1_HERAU	MODIFICATION METHYLASE HGICI	HERPETOSIPHON AURANTIACUS	120-147								
PMTC2_HERAU	MODIFICATION METHYLASE HGICII	HERPETOSIPHON AURANTIACUS	281-311								
PMTE1_ECOLI	MODIFICATION METHYLASE ECORI	ESCHERICHIA COLI	76-110	145-172							
PMTE1_HERAU	MODIFICATION METHYLASE HGIEI	HERPETOSIPHON AURANTIACUS	281-308								
PMTE2_ECOLI	MODIFICATION METHYLASE ECORII	ESCHERICHIA COLI	4-61								
PMTE3_ECOLI	MODIFICATION METHYLASE ECO RV	ESCHERICHIA COLI	73-100								
PMTEC_ENTCL	MODIFICATION METHYLASE ECLI	ENTEROBACTER CLOACAE	418-445								
PMTF1_FLAOK	MODIFICATION METHYLASE FOKI	FLAVOBACTERIUM OKEANOKOITES	184-211	279-306	337-366	398-425	555-646				
PMTF1_FUSNU	MODIFICATION METHYLASE FNUDI	FUSOBACTERIUM NUCLEATUM	22-49								
PMTG1_HAEGA	MODIFICATION METHYLASE HGAI-2	HAEMOPHILUS GALLINARUM	135-163								
PMTH3_HAEIN	MODIFICATION METHYLASE HINCII	HAEMOPHILUS INFLUENZAE	181-208	399-426							
PMTH2_METTF	MODIFICATION METHYLASE MTHZI	METHANOBACTERIUM THERMOFORMICICUM	188-215	296-323							
PMTK1_KLEPN	MODIFICATION METHYLASE KPNI	KLEBSIELLA PNEUMONIAE	270-297								
PMTLD_STRMU	MANNITOL-1-PHOSPHATE 5-DEHYDROGENASE	STREPTOCOCCUS MUTANS	39-66	224-238	349-376						
PMTM1_MORSP	MODIFICATION METHYLASE MSPI	MORAXELLA SP	5-39	49-104							
PMTN3_NEILA	MODIFICATION METHYLASE NLAIII	NEISSERIA LACTAMICA	124-158	183-210							
PMTP2_PROVU	MODIFICATION METHYLASE PVUII	PROTEUS VULGARIS	308-335								
PMTPO_SULAC	MEMBRANE-ASSOCIATED ATPASE	SULFOLOBUS ACIDOCALDARIUS	9-67								
PMTPS_PROST	MODIFICATION METHYLASE PSTI	PROVIDENCIA STUARTII	226-264								
PMTR_ECOLI	TRYPTOPHAN-SPECIFIC TRANSPORT PROTEIN	ESCHERICHIA COLI	80-107								
PMTS1_STRSA	MODIFICATION METHYLASE STSI	STREPTOCOCCUS SANGUIS	116-153	434-461	600-645						
PMTS2_SHISO	MODIFICATION METHYLASE SSOII	SHIGELLA SONNEI	81-108								
PMTS9_STAAU	MODIFICATION METHYLASE SAU96I	STAPHYLOCOCCUS AUREUS	233-274								
PMTSA_LACLC	MODIFICATION METHYLASE SCRFI-A	LACTOCOCCUS LACTIS	88-115	187-214							
PMTSD_LACLC	MODIFICATION METHYLASE SCRFI-B	LACTOCOCCUS LACTIS	27-61								
PMTSI_SPISQ	CPG DNA METHYLASE	SPIROPLASMA SP	188-210	256-290							
PMTSM_SERMA	MODIFICATION METHYLASE SMAI	SERRATIA MARCESCENS	61-88								
PMTT8_THETH	MODIFICATION METHYLASE TTH8III	THERMUS AQUATICUS	120-157								
PMTV1_VIBSI	MODIFICATION METHYLASE VSPI	VIBRIO SP	23-66								
PMUKD_ECOLI	MUKB PROTEIN	ESCHERICHIA COLI	320-381	1014-1048	1216-1252						
PMULI_ERWAM	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	ERWINIA AMYLOVORA	24-54								
PMULI_MORMO	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	MORGANELLA MORGANII	27-54								
PMULI_PROMI	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	PROTEUS MIRABILIS	21-63								
PMURB_BACSU	UDP-LIGASE	BACILLUS SUBTILIS	101-132	299-326							
PMURE_ECOLI	LIGASE	ESCHERICHIA COLI	107-134								
PMURF_ECOLI	UDP-MURNAC-PENTAPEPTIDE SYNTHETASE	ESCHERICHIA COLI	407-437								
PMURZ_ECOLI	ENOYLPYRUVATE TRANSFERASE	ESCHERICHIA COLI	392-419								
PMURZ_ENTCL	ENOYLPYRUVATE TRANSFERASE	ENTEROBACTER CLOACAE	392-419								
PMUTA_STRCM	METHYLMALONYL-COA MUTASE BETA-SUBUNIT	STREPTOMYCES CINNAMONENSIS	31-58								

BAD ORIGINAL

PCGENE	1076178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMUTB_PROFR	METHYLMALONYL-COA MUTASE ALPHA-SUBUNIT	PROPIONIBACTERIUM FREUDENREICHII	549-576								
PMUTB_SALTY	40-SPECIFIC ADENINE GLYCOSYLASE	SALMONELLA TYPHIMURIUM	273-300								
PMUTB_STRCM	METHYLMALONYL-COA MUTASE ALPHA-SUBUNIT	STREPTOMYCES CINNAMONENSIS	481-508								
PMUTL_ECOLI	DNA MISMATCH REPAIR PROTEIN MUTL	ESCHERICHIA COLI	80-114								
PMUTL_SALTY	DNA MISMATCH REPAIR PROTEIN MUTL	SALMONELLA TYPHIMURIUM	80-114								
PMUTL_VIBCH	PROTEIN MUTL	VIBRIO CHOLERAE	134-169								
PMUTS_ECOLI	DNA MISMATCH REPAIR PROTEIN MUTS	ESCHERICHIA COLI	119-153								
PMUTT_STRAM	MUTT-LIKE PROTEIN	STREPTOMYCES AMBOFACIENS	60-87								
PMVAA_PSEMV	COENZYME A REDUCTASE	PSEUDOMONAS MEVALONII	341-368								
PMX_STRPY	M-RELATED PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	5-129	148-182	190-217	240-301					
PMYCO_STRCI	MYCOLYSIN PRECURSOR	STREPTOMYCES CACAOI	300-352								
PMYFC_YEREN	MYFC PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	210-237								
PNADC_SALTY	NICOTINATE-NUCLEOTIDE PYROPHOSPHORYLASE	SALMONELLA TYPHIMURIUM	123-154	253-289							
PNADR_SALTY	TRANSCRIPTIONAL REGULATOR NADR	SALMONELLA TYPHIMURIUM	233-260								
PNAGD_ECOLI	NAGD PROTEIN	ESCHERICHIA COLI	75-102								
PNAGH_CLOPE	HYALURONOGLUCOSAMINIDASE	CLOSTRIDIUM PERFRINGENS	48-75	990-1017							
PNAGR_ECOLI	NAGR PROTEIN	ESCHERICHIA COLI	119-153								
PNANH_CLOSE	SIALIDASE PRECURSOR	CLOSTRIDIUM SEPTICUM	11-42.	289-330	922-988						
PNANH_CLOSO	SIALIDASE PRECURSOR	CLOSTRIDIUM SORDELLII	377-404								
PNANH_SALTY	SIALIDASE	SALMONELLA TYPHIMURIUM	290-317								
PNAPA_ENTHR	NA(+)/H(+) ANTIPORTER	ENTEROCOCCUS HIRAE	116-150								
PNARG_ECOLI	RESPIRATORY NITRATE REDUCTASE ALPHA CHAIN	ESCHERICHIA COLI	386-420								
PNARL_ECOLI	REGULATOR PROTEIN NARL	ESCHERICHIA COLI	76-103								
PNARP_ECOLI	REGULATOR PROTEIN NARP	ESCHERICHIA COLI	155-189								
PNARX_ECOLI	NITRATE/NITRITE SENSOR PROTEIN NARX	ESCHERICHIA COLI	220-247	358-385	431-458	505-538					
PNDVA_RHIME	BETA-(1->2)GLUCAN EXPORT PROTEIN	RHIZOBIUM MELILOTI	212-239								
PNEOR_STRCY	NEOMYCIN RESISTANCE PROTEIN	STREPTOMYCES CYANOGENUS	348-375								
PNEUA_ECOLI	ACYLNEURAMINATE CYTIDYLYLTRANSFERASE	ESCHERICHIA COLI	218-252	268-298							
PNFRA_ECOLI	N4 ADSORPTION PROTEIN A PRECURSOR	ESCHERICHIA COLI	490-517								
PNFRB_ECOLI	N4 ADSORPTION PROTEIN B	ESCHERICHIA COLI	2-43	186-220	511-538						
PNFRC_ECOLI	N4 ADSORPTION PROTEIN C	ESCHERICHIA COLI	315-342								
PNFSI_ENTCL	NAD(P)H NITROREDUCTASE	ENTEROBACTER CLOACAE	9-36								
PNHAA_ECOLI	NA(+)/H(+) ANTIPORTER 1	ESCHERICHIA COLI	206-233								
PNHAB_ECOLI	NA(+)/H(+) ANTIPORTER 2	ESCHERICHIA COLI	271-305								
PNHAB_PSECL	NITRILE HYDRATASE SUBUNIT BETA	PSEUDOMONAS CHLORORAPHIS	71-101								
PNHBI_RHORH	NITRILE HYDRATASE SUBUNIT BETA	RHODOCOCCUS RHODOCHROUS	63-93								
PNIFA_AZOBR	NIF-SPECIFIC REGULATORY PROTEIN	AZOSPIRILLUM BRASILENSE	7-44								
PNIFA_BRAJA	NIF-SPECIFIC REGULATORY PROTEIN	BRADYRHIZOBIUM JAPONICUM	252-279								
PNIFA_HERSE	NIF-SPECIFIC REGULATORY PROTEIN	HERBASPIRILLUM SEROPEDICAE	9-51	162-203	327-354						
PNIFA_RHILE	NIF-SPECIFIC REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	100-127								
PNIFA_RHIME	NIF-SPECIFIC REGULATORY PROTEIN	RHIZOBIUM MELILOTI	171-198								
PNIFA_RHOCA	NIF-SPECIFIC REGULATORY PROTEIN	RHODOBACTER CAPSULATUS	260-287								
PNIFB_AZOVI	NIFB PROTEIN	AZOTOBACTER VINELANDII	342-369								
PNIFB_KLEPN	NIFB PROTEIN	KLEBSIELLA PNEUMONIAE	154-181								
PNIFD_ANASP	NITROG MOLYBD-IRON PROTEIN	ANABAENA SP	374-401								
PNIFD_AZOBR	NITROG MOLYBD-IRON PROTEIN	AZOSPIRILLUM BRASILENSE	377-404								
PNIFD_PLEBO	NITROG MOLYBD-IRON PROTEIN	PLECTONEMA BORYANUM	387-414								
PNIFD_THIFE	NITROG MOLYBD-IRON PROTEIN	THIOBACILLUS FERROOXIDANS	383-410								
PNIFE_CLOPA	BIOSYNTHESIS PROTEIN NIFE	CLOSTRIDIUM PASTEURIANUM	359-386								
PNIFH_FRAAR	NITROGENASE IRON PROTEIN	FRANKIA SP	56-83								
PNIFH_PLEBO	NITROGENASE IRON PROTEIN	PLECTONEMA BORYANUM	267-294								
PNIFK_AZOBR	NITROG MOLYBD-IRON PROTEIN	AZOSPIRILLUM BRASILENSE	430-457								
PNIFK_BRAJA	NITROG MOLYBD-IRON PROTEIN	BRADYRHIZOBIUM JAPONICUM	483-510								
PNIFK_BRASP	NITROG MOLYBD-IRON PROTEIN	BRADYRHIZOBIUM SP	478-505								
PNIFK_CLOPA	NITROG MOLYBD-IRON PROTEIN	CLOSTRIDIUM PASTEURIANUM	227-254								
PNIFK_THIFE	NITROG MOLYBD-IRON PROTEIN	THIOBACILLUS FERROOXIDANS	479-506								
PNIFM_AZOCH	NIFM PROTEIN	AZOTOBACTER CHROOCOCCUM MCD 1	265-292								

BAD ORIGINAL

PCGENE	107s178s4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNIFN_BRAJA	BIOSYNTHESIS PROTEIN NIFN	BRADYRHIZOBIUM JAPONICUM	339-366								
PNIFS_ANASP	NIFS PROTEIN	ANABAENA SP	112-139								
PNIFS_LACDE	NIFS PROTEIN HOMOLOG	LACTOBACILLUS DELBRUECKII	59-86								
PNIFT_AZOVI	NIFT PROTEIN	AZOTOBACTER VINELANDII	6-33								
PNIFU_ANASL	NIFU PROTEIN	ANABAENA SP	7-49								
PNIFU_ANASP	NIFU PROTEIN	ANABAENA SP	148-178								
PNIFU_KLEPN	NIFU PROTEIN	KLEBSIELLA PNEUMONIAE	66-93								
PNIKA_ECOLI	NICKEL TRANSPORT PROTEIN NIKA PRECURSOR	ESCHERICHIA COLI	122-149	282-309	456-483						
PNIKE_ECOLI	NICKEL TRANSPORT PROTEIN NIKE	ESCHERICHIA COLI	177-204								
PNIRB_ECOLI	NITRITE REDUCTASE	ESCHERICHIA COLI	54-81	345-372							
PNIRC_ECOLI	NIRC PROTEIN	ESCHERICHIA COLI	212-239								
PNIRS_PSEST	PSEUDOMONAS CYTOCHROME OXIDASE PRECURSO	PSEUDOMONAS STUTZERI	303-333								
PNISB_LACLA	117 KD MEMBRANE ASSOCIATED PROTEIN	LACTOCOCCUS LACTIS	202-229	287-332	663-697	886-920					
PNISC_LACLA	NISIN BIOSYNTHESIS PROTEIN NISC	LACTOCOCCUS LACTIS	52-92	140-188							
PNIST_LACLA	NISIN TRANSPORT PROTEIN NIST	LACTOCOCCUS LACTIS	223-257	278-305	426-470						
PNIVA_CLOPA	HOMOCITRATE SYNTHASE, ALPHA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	100-127	234-268							
PNIVO_CLOPA	HOMOCITRATE SYNTHASE, OMEGA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	63-94	103-132	213-240	283-310					
PNMPC_ECOLI	PORIN PROTEIN NMPC PRECURSOR	ESCHERICHIA COLI	22-49	69-96	335-362						
PNODC_BRASP	NODULATION PROTEIN C	BRADYRHIZOBIUM SP	3-30								
PNODC_RHILO	NODULATION PROTEIN C	RHIZOBIUM LOTI	286-313								
PNODC_RHILT	NODULATION PROTEIN C	RHIZOBIUM LEGUMINOSARUM	14-48								
PNODF_RHILV	NODULATION PROTEIN F	RHIZOBIUM LEGUMINOSARUM	31-58								
PNODF_RHIMS	NODULATION PROTEIN F	RHIZOBIUM MELILOTI	39-66								
PNODO_RHIME	NODULATION PROTEIN O	RHIZOBIUM MELILOTI	8-35								
PNODO_RHIMS	NODULATION PROTEIN O	RHIZOBIUM MELILOTI	8-35								
PNODL_RHILV	NODULATION PROTEIN L	RHIZOBIUM LEGUMINOSARUM	26-53								
PNODQ_AZOBR	NODULATION PROTEIN Q	AZOSPIRILLUM BRASILENSE	60-87								
PNODT_RHILT	NODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	104-134	355-382	420-454						
PNODT_RHILV	NODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	364-391	416-443							
PNODU_RHIFR	NODULATION PROTEIN U	RHIZOBIUM FREDII	506-536								
PNODV_BRAJA	NODULATION PROTEIN V	BRADYRHIZOBIUM JAPONICUM	378-419	739-766							
PNODX_RHILV	NODULATION PROTEIN X	RHIZOBIUM LEGUMINOSARUM	232-259								
PNOLB_RHIFR	NODULATION PROTEIN NOLB	RHIZOBIUM FREDII	133-160								
PNOLR_RHIME	NODULATION PROTEIN NOLR	RHIZOBIUM MELILOTI	88-115								
PNOSD_PSEST	NOSD PROTEIN PRECURSOR	PSEUDOMONAS STUTZERI	319-346								
PNOSR_PSEST	REGULATORY PROTEIN NOSR	PSEUDOMONAS STUTZERI	127-154								
PNOSZ_PSEAE	NITROUS-OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS AERUGINOSA	267-294								
PNOSZ_PSEST	NITROUS-OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS STUTZERI	551-591								
PNPRE_BACAM	BACILLOLYSIN PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	113-147	217-244							
PNPRE_BACPO	BACILLOLYSIN PRECURSOR	BACILLUS POLYMYXA	57-91	187-228							
PNPRE_BACSU	BACILLOLYSIN PRECURSOR	BACILLUS SUBTILIS	116-146	307-334							
PNQO3_PARDE	NADH-UBIQUINONE OXIDOREDUCTASE 21 KD CHAI	PARACOCCUS DENITRIFICANS	4-45								
PNQO9_PARDE	NADH-UBIQUINONE OXIDOREDUCTASE 20 KD CHAIN	PARACOCCUS DENITRIFICANS	124-152								
PNRDD_ECOLI	ANAER RIBONUC-TRIPHOS REDUCTASE	ESCHERICHIA COLI	91-125								
PNRFA_ECOLI	CYTOCHROME C552 PRECURSOR	ESCHERICHIA COLI	319-346								
PNRFG_ECOLI	NRFG PROTEIN	ESCHERICHIA COLI	72-111								
PNRLI_RHORH	ALIPHATIC NITRILASE	RHODOCOCCUS RHODOCHROUS	109-136								
PNSR_LACLA	NISIN-RESISTANCE PROTEIN	LACTOCOCCUS LACTIS	52-79	135-162							
PNTCA_ANASP	DNA-BINDING PROTEIN VF1	ANABAENA SP	65-92								
PNTCA_SYNP7	GLOBAL NITROGEN REGULATOR	SYNECHOCOCCUS SP	44-91								
PNTCA_SYNY3	GLOBAL NITROGEN REGULATOR	SYNECHOCYSTIS SP	67-94								
PNTRB_VIBAL	NITROGEN REGULATION PROTEIN NTRB	VIBRIO ALGINOLYTICUS	194-223								
PNTRC_PROVU	NITROGEN REGULATION PROTEIN NR	PROTEUS VULGARIS	385-412								
PNTRC_RHIME	NITROGEN ASSIMILATION REGULATORY PROTEIN	RHIZOBIUM MELILOTI	451-478								
PNUIC_SYNP7	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCUS SP	80-107								
PNUIC_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	27-54								
PNUIC_SYNP2	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCUS SP	614-641								

BEST AVAILABLE COPY

PCGENE	1078x1784	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNUJC_SYNY3	PROB NADH-UBIQUINONE OXIDOREDUCTASE SUBU	SYNECHOCYSTIS SP	163-190								
PNUKC_SYNY3	PROB NADH-UBIQUINONE OXIDOREDUCTASE SUBU	SYNECHOCYSTIS SP	169-199								
PNULX_SYNY3	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	46-80								
PNUOO_ECOLI	NADH DEHYDROGENASE I CHAIN O	ESCHERICHIA COLI	368-402								
PNUOL_ECOLI	NADH DEHYDROGENASE I CHAIN L	ESCHERICHIA COLI	30-57	496-523							
PNUON_ECOLI	NADH DEHYDROGENASE I CHAIN N	ESCHERICHIA COLI	392-419								
PNUPC_ECOLI	NUCLEOTIDE PERMEASE	ESCHERICHIA COLI	13-43	134-164	356-383						
PNUSA_ECOLI	NUSA PROTEIN	ESCHERICHIA COLI	21-62								
PNUSB_ECOLI	N UTILIZATION SUBSTANCE PROTEIN B	ESCHERICHIA COLI	17-65	70-97							
PNUSG_ECOLI	TRANSCRIPTION ANTITERMINATION PROTEIN NUS	ESCHERICHIA COLI	141-168								
PNUSG_THEMA	TRANSCRIPTION ANTITERMINATION PROTEIN NUS	THERMOTOGA MARITIMA	203-230								
PNYLB_FLASP	6-AMINOHEXANOATE-DIMER HYDROLASE	FLAVOBACTERIUM SP	223-250								
PNYLC_FLASP	6-AMINOHEXANOATE-DIMER HYDROLASE	FLAVOBACTERIUM SP	223-250								
PO16G_BACCE	OLIGO-1,6-GLUCOSIDASE	BACILLUS CEREUS	301-328								
POCCT_AGRT6	OCTOPINE-BINDING PROTEIN T PRECURSOR	AGROBACTERIUM TUMEFACIENS	172-202								
PODO1_AZOVI	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	AZOTOBACTER VINELANDII	829-856								
PODO1_BACSU	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	BACILLUS SUBTILIS	487-524	809-850							
PODO1_ECOLI	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	ESCHERICHIA COLI	6-33								
PODO2_BACSU	DIHYDROLIPOAMIDE SUC-TRANSF COMP	BACILLUS SUBTILIS	30-60								
PODOB_PSEPU	2-OXOGLUTARATE DEHYDROGENASE E1 COMPONE	PSEUDOMONAS PUTIDA	223-254								
PODP1_ECOLI	PYRUVATE DEHYDROGENASE E1 COMPONENT	ESCHERICHIA COLI	624-651								
PODP2_AZOVI	DIHYDROLIPOAMIDE ACETRANS COMP	AZOTOBACTER VINELANDII	518-545								
PODP2_ECOLI	DIHYDROLIPOAMIDE ACETRANS COMP	ESCHERICHIA COLI	14-41	117-144							
PODPA_BACST	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS STEAROTHERMOPHILUS	299-333								
PODPA_BACSU	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS SUBTILIS	305-332								
PODPB_BACST	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS STEAROTHERMOPHILUS	23-50								
PODPB_BACSU	PYRUVATE DEHYDROGENASE E1 COMPONENT	BACILLUS SUBTILIS	16-50								
POMIE_CHLTR	15 KD CYSTEINE-RICH PROTEIN, SEROVAR E	CHLAMYDIA TRACHOMATIS	38-65								
POMA1_NEIGO	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
POMA1_NEIME	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA MENINGITIDIS	359-386								
POMA2_NEIME	OUTER MEMBRANE PROTEIN P1 A PRECURSOR	NEISSERIA MENINGITIDIS	353-380								
POMB1_NEIGO	OUTER MEMBRANE PROTEIN P IB PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
POMB1_NEIME	OUTER MEMBRANE PROTEIN P.IB PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
POMB2_NEIGO	OUTER MEMBRANE PROTEIN P.IB PRECURSOR	NEISSERIA GONORRHOEAE	63-90								
POMB2_NEIME	OUTER MEMBRANE PROTEIN P IB PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
POMB3_NEIME	OUTER MEMBRANE PROTEIN P IB PRECURSOR	NEISSERIA MENINGITIDIS	63-90								
POMB4_NEIME	OUTER MEMBRANE PROTEIN P IB PRECURSOR	NEISSERIA MENINGITIDIS	24-51	63-90							
POMD_NEILA	OUTER MEMBRANE PROTEIN P.ID PRECURSOR	NEISSERIA LACTAMICA	116-143								
POMB_NEISI	OUTER MEMBRANE PROTEIN P.ID PRECURSOR	NEISSERIA SICCA	24-51	63-90							
POMLA_ACTPL	OUTER MEMBRANE LIPOPROTEIN PRECURSOR	ACTINOBACILLUS PLEUROPNEUMONIAE	114-151								
POMP1_HAEIN	OUTER MEMBRANE PROTEIN P1 PRECURSOR	HAEMOPHILUS INFLUENZAE	154-184	303-330	341-368						
POMP2_HAEIN	OUTER MEMBRANE PROTEIN P2 PRECURSOR	HAEMOPHILUS INFLUENZAE	16-71	220-254	326-353						
POMP3_NEIGO	OUTER MEMBRANE PROTEIN P.III PRECURSOR	NEISSERIA GONORRHOEAE	14-41								
POMP7_STAAU	70 KD OUTER MEMBRANE PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	53-80	88-115							
POMPA_THEMA	OUTER MEMBRANE PROTEIN ALPHA PRECURSOR	THERMOTOGA MARITIMA	100-138	151-178	183-249	255-292	301-328	351-385			
POMPC_ECOLI	OUTER MEMBRANE PROTEIN C PRECURSOR	ESCHERICHIA COLI	20-47	64-94							
POMPC_NEIGO	OUTER MEMBRANE PROTEIN P.IIC PRECURSOR	NEISSERIA GONORRHOEAE	89-123								
POMPC_SALTI	OUTER MEMBRANE PROTEIN C PRECURSOR	SALMONELLA TYPHI	166-193								
POMPF_ECOLI	OUTER MEMBRANE PROTEIN F PRECURSOR	ESCHERICHIA COLI	21-55	231-258							
POMPH_PHOS9	OMPH PROTEIN	PHOTOBACTERIUM SP	292-319								
POMPT_ECOLI	PROTEASE VII PRECURSOR	ESCHERICHIA COLI	37-64								
POP65_NEIGO	OPACITY PROTEIN OPA65	NEISSERIA GONORRHOEAE	71-111								
POP67_NEIGO	OPACITY PROTEIN OPA67	NEISSERIA GONORRHOEAE	72-109								
POPAA_NEIGO	OPACITY PROTEIN OPA33	NEISSERIA GONORRHOEAE	71-123	140-167							
POPAG_NEIGO	OPACITY PROTEIN OPA32	NEISSERIA GONORRHOEAE	80-107	140-167							
POPAJ_NEIGO	OPACITY PROTEIN OPA34	NEISSERIA GONORRHOEAE	80-107								
POPAJ_NEIGO	OPACITY PROTEIN OPA38	NEISSERIA GONORRHOEAE	71-105								

BAD ORIGINAL

PCGENE	1892178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
POPAK_NEIGO	OPACITY PROTEIN OPA57	NEISSERIA GONORRHOEAE	71-105								
POPDA_ECOLI	OLIGOPEPTIDASE A	ESCHERICHIA COLI	147-174								
POPDA_SALTY	OLIGOPEPTIDASE A	SALMONELLA TYPHIMURIUM	147-174								
POPDE_PSEAE	TRANSCRIPTION FACTOR OPDE	PSEUDOMONAS AERUGINOSA	64-91								
POPPA_ECOLI	OLIGOPEPTIDE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	402-432								
POPPB_SALTY	OLIGOPEPTIDE PERMEASE PROTEIN OPPB	SALMONELLA TYPHIMURIUM	265-299								
POPRI_NEIME	OPACITY-RELATED PROTEIN POPM1	NEISSERIA MENINGITIDIS	108-135								
POPRJ_NEIME	OPACITY-RELATED PROTEIN POPM3	NEISSERIA MENINGITIDIS	94-135								
POSMC_ECOLI	OSMOTICALLY INDUCIBLE PROTEIN OSMC	ESCHERICHIA COLI	5-32								
POSPA_BORBU	OUTER SURFACE PROTEIN A PRECURSOR	BORRELIA BURGDORFERI	63-100	112-139	157-204	223-271					
POSPB_BORBU	OUTER SURFACE PROTEIN B PRECURSOR	BORRELIA BURGDORFERI	113-259	262-296							
POTC2_BACSU	ORNITHINE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	188-215								
POTCC_PSEAE	ORNITHINE CARBAMOYLTRANSFERASE	PSEUDOMONAS AERUGINOSA	17-44								
POTCC_PSEPU	ORNITHINE CARBAMOYLTRANSFERASE	PSEUDOMONAS PUTIDA	3-33								
POUTB_BACSU	SPORE OUTGROWTH FACTOR B	BACILLUS SUBTILIS	225-252								
POUTO_ERWCA	LEADER PEPTIDASE	ERWINIA CAROTOVORA	189-216								
PP18K_STRPA	18 KD PROTEIN IN FIMA 3'REGION	STREPTOCOCCUS PARASANGUIS	115-149								
PP18K_STRSA	18 KD PROTEIN IN SSAB 3'REGION	STREPTOCOCCUS SANGUIS	10-37	114-148							
PP1P_LACLC	PI-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1446-1496	1625-1655			
PP29_MYCHR	PROTEIN P29	MYCOPLASMA HYORHINIS	5-56	101-160	202-246						
PP2P_LACLA	PII-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1446-1496	1625-1689			
PP2P_LACPA	PII-TYPE PROTEINASE PRECURSOR	LACTOBACILLUS PARACASEI	107-155	904-941	1073-1100	1223-1250	1446-1496	1628-1655			
PP30_ECOLI	P30 PROTEIN	ESCHERICHIA COLI	55-82								
PP34_RICRI	PROTEIN P34	RICKETTSIA RICKETTSII	9-47	135-173							
PP37_MYCHR	PROTEIN P37 PRECURSOR	MYCOPLASMA HYORHINIS	38-75								
PP3P_LACLC	PIII-TYPE PROTEINASE PRECURSOR	LACTOCOCCUS LACTIS	107-155	904-950	1073-1100	1223-1250	1446-1496	1628-1655			
PP47K_PSECL	47 KD PROTEIN	PSEUDOMONAS CHLORORAPHIS	288-315								
PP54_ENTFC	P54 PROTEIN PRECURSOR	ENTEROCOCCUS FAECIUM	58-92	141-209							
PP60_LISGR	PROTEIN P60 PRECURSOR	LISTERIA GRAYI	31-61	101-142	300-334	431-458					
PP60_LISIN	PROTEIN P60 PRECURSOR	LISTERIA INNOCUA	67-94	102-143							
PP60_LISIV	PROTEIN P60 PRECURSOR	LISTERIA IVANOVII	101-140	315-359							
PP60_LISMO	PROTEIN P60 PRECURSOR	LISTERIA MONOCYTOGENES	103-144								
PP60_LISSE	PROTEIN P60 PRECURSOR	LISTERIA SEELIGERI	101-140	270-298	321-365	395-422					
PP60_LISWE	PROTEIN P60 PRECURSOR	LISTERIA WELSHIMERI	113-140	317-361	396-423						
PP69_MYCHR	PROTEIN P69	MYCOPLASMA HYORHINIS	264-295	421-464	487-517	544-575					
PPABA_BACSU	ADC SYNTHASE	BACILLUS SUBTILIS	13-41								
PPABC_BACSU	4-AMINO-4-DEOXYCHORISMATE LYASE	BACILLUS SUBTILIS	250-277								
PPABC_ECOLI	4-AMINO-4-DEOXYCHORISMATE LYASE	ESCHERICHIA COLI	140-167								
PPABL_STRGR	PROTEIN Y	STREPTOMYCES GRISEUS	52-79								
PPAC_ARTVI	PENICILLIN ACYLASE PRECURSOR	ARTHROBACTER VISCOSUS	170-197	333-363	571-606	640-674					
PPAC_BACSH	PENICILLIN ACYLASE	BACILLUS SPHAERICUS	232-259								
PPAC_STRMU	PAC PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	146-276	281-465	538-565	576-630	1075-1102	1159-1186	1381-1434		
PPAI1_BACSU	REGULATORY PROTEIN PAI 1	BACILLUS SUBTILIS	103-139								
PPAI2_BACSU	REGULATORY PROTEIN PAI 2	BACILLUS SUBTILIS	145-172								
PPAPE_ECOLI	FIMBRIAL PROTEIN PAPE	ESCHERICHIA COLI	42-69	86-123							
PPAPF_ECOLI	MINOR FIMBRIAL PROTEIN PAPF	ESCHERICHIA COLI	4-31								
PPAPG_ECOLI	FIMBRIAL PROTEIN PAPG PRECURSOR	ESCHERICHIA COLI	282-316								
PPARA_AGRTU	PARA PROTEIN	AGROBACTERIUM TUMEFACIENS	60-87								
PPARB_ECOLI	PLASMID PARTITION PAR B PROTEIN	ESCHERICHIA COLI	117-154	249-283							
PPARE_ECOLI	TOPOISOMERASE IV SUBUNIT B	ESCHERICHIA COLI	444-471	526-553							
PPARE_SALTY	TOPOISOMERASE IV SUBUNIT B	SALMONELLA TYPHIMURIUM	444-471	526-553							
PPA_BACAN	PROTECTIVE ANTIGEN PRECURSOR	BACILLUS ANTHRACIS	13-52	125-152	296-335	585-615	650-684				
PPBP2_ECOLI	PENICILLIN-BINDING PROTEIN 2	ESCHERICHIA COLI	95-122	178-205	207-241						
PPBP2_NEIGO	PENICILLIN-BINDING PROTEIN 2	NEISSERIA GONORRHOEAE	193-220								
PPBP2_NEIME	PENICILLIN-BINDING PROTEIN 2	NEISSERIA MENINGITIDIS	193-220								
PPBP2_STRPN	PENICILLIN-BINDING PROTEIN 2B	STREPTOCOCCUS PNEUMONIAE	144-183	216-243	259-286	605-632					
PPBPJ_ECOLI	PENICILLIN-BINDING PROTEIN 3 PRECURSOR	ESCHERICHIA COLI	224-251	334-368							

BAD ORIGINAL

PCGENE	107x17Bx4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	ORGANISM									
PPBP4_BACSU	PENICILLIN-BINDING PROTEIN 4*	BACILLUS SUBTILIS	374-401								
PPBP4_ECOLI	PENICILLIN-BINDING PROTEIN 4 PRECURSOR	ESCHERICHIA COLI	136-163								
PPBPA_ECOLI	PENICILLIN-BINDING PROTEIN 1A	ESCHERICHIA COLI	145-172								
PPBPB_ECOLI	PENICILLIN-BINDING PROTEIN 1B	ESCHERICHIA COLI	92-96	263-290							
PPBPX_STRPN	PENICILLIN-BINDING PROTEIN 2X	STREPTOCOCCUS PNEUMONIAE	89-116	706-733							
PPBP_STAAU	PENICILLIN-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	78-108	176-203	261-324	503-529					
PPCAB_PSEPU	CYCLOISOMERASE	PSEUDOMONAS PUTIDA	115-142	226-253							
PPELJ_ERWCA	PECTATE LYASE III PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELA_ERWCA	PECTATE LYASE A PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELB_ERWCA	PECTATE LYASE B PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELC_ERWCA	PECTATE LYASE C PRECURSOR	ERWINIA CAROTOVORA	110-137								
PPELF_ERWCH	PECTATE LYASE E PRECURSOR	ERWINIA CHRYSANTHEMI	40-67	209-243							
PPELP_ERWCA	PERIPLASMIC PECTATE LYASE PRECURSOR	ERWINIA CAROTOVORA	455-482								
PPELP_YERPS	PERIPLASMIC PECTATE LYASE PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	439-489								
PPELX_ERWCA	PUTATIVE PECTATE LYASE X PRECURSOR	ERWINIA CAROTOVORA	188-218								
PPELX_ERWCH	EXOPOLYGALACTURONATE LYASE PRECURSOR	ERWINIA CHRYSANTHEMI	466-493								
PPEPD_ECOLI	AMINOACYL-HISTIDINE DIPEPTIDASE	ESCHERICHIA COLI	264-314								
PPEPQ_ECOLI	X-PRO DIPEPTIDASE	ESCHERICHIA COLI	231-278								
PPERT_BORBR	PERTACTIN PRECURSOR	BORDETELLA BRONCHISEPTICA	617-644								
PPERT_BORPA	PERTACTIN PRECURSOR	BORDETELLA PARAPERTUSSIS	628-655								
PPERT_BORPE	PERTACTIN PRECURSOR	BORDETELLA PERTUSSIS	616-643								
PPGK_CORGL	PHOSPHOGLYCERATE KINASE	CORYNEBACTERIUM GLUTAMICUM	93-117								
PPGK_ECOLI	PHOSPHOGLYCERATE KINASE	ESCHERICHIA COLI	186-216								
PPGK_METBR	PHOSPHOGLYCERATE KINASE	METHANOBACTERIUM BRYANTII	136-63								
PPGK_THETH	PHOSPHOGLYCERATE KINASE	THERMUS AQUATICUS	222-249								
PPGLI_ERWCA	ENDO-POLYGALACTURONASE PRECURSOR	ERWINIA CAROTOVORA	237-271								
PPGTE_SALTY	OUTER MEMBRANE PROTEASE E PRECURSOR	SALMONELLA TYPHIMURIUM	66-93								
PPHAI_FREDI	C-PHYCOCYANIN-1 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48								
PPHAJ_FREDI	C-PHYCOCYANIN-2 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48								
PPHAA_PSEOL	POLY(3-HYDROXYALKANOATE) POLYMERASE 1	PSEUDOMONAS OLEOVORANS	264-291								
PPHAB_ANACY	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA CYLINDRICA	7-48								
PPHAB_ANAVA	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA VARIABILIS	14-48								
PPHAB_FREDI	ALLOPHYCOCYANIN BETA CHAIN	FREMYELLA DIPLOSIPHON	8-49								
PPHAB_MASLA	ALLOPHYCOCYANIN BETA CHAIN	MASTIGOCLADUS LAMINOSUS	14-41								
PPHAB_SYNP6	ALLOPHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	14-41								
PPHAC_SYNP6	ALLOPHYCOCYANIN ALPHA-B CHAIN	SYNECHOCOCCUS SP	33-60								
PPHAO_FREDI	ALLOPHYCOCYANIN GAMMA CHAIN	FREMYELLA DIPLOSIPHON	32-59								
PPHBJ_FREDI	C-PHYCOCYANIN-3 BETA CHAIN	FREMYELLA DIPLOSIPHON	29-56								
PPHBB_ALCEU	ACETOACETYL-COA REDUCTASE	ALCALIGENES EUTROPHUS	55-83								
PPHCA_SYNY1	C-PHYCOCYANIN ALPHA CHAIN	SYNECHOCYSTIS SP	21-55								
PPHCB_SYNP6	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55								
PPHCB_SYNP7	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55								
PPHCB_SYNY1	C-PHYCOCYANIN BETA CHAIN	SYNECHOCYSTIS SP	21-55								
PPHEA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	10-37								
PPHEA_ERWHE	CHORISMATE MUTASE	ERWINIA HERBICOLA	10-37	139-186	252-286						
PPHEA_PSESP	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS SP	171-201	282-314	437-464						
PPIEB_MASLA	PHYCOERYTHROCYANIN BETA CHAIN	MASTIGOCLADUS LAMINOSUS	21-62								
PPHEB_PSESP	CATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS SP	24-51								
PPHEG_SYNPY	LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	158-185								
PPHEP_ECOLI	PHENYLALANYL-SPECIFIC PERMEASE	ESCHERICHIA COLI	284-311								
PPHF1_CLOPA	PERIPLASMIC [FE] HYDROGENASE 1	CLOSTRIDIUM PASTEURIANUM	434-471								
PPHL1_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHL1_BACTE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHL3_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPHLC_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	32-59	179-206							
PPHLC_CLOBI	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM BIFERMENTANS	50-77	335-363							
PPHLC_CLOPE	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM PERFRINGENS	210-237	369-398							

BAD ORIGINAL

PCGENE	107a17814	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPHLC_LISMO	PHOSPHOLIPASE C PRECURSOR	LISTERIA MONOCYTOGENES	147-174								
PPHLC_PSEAE	HEMOLYTIC PHOSPHOLIPASE C PRECURSOR	PSEUDOMONAS AERUGINOSA	685-712								
PPHLC_STAAU	PHOSPHOLIPASE C PRECURSOR	STAPHYLOCOCCUS AUREUS	6-33								
PPHLD_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	176-206								
PPHL_LEPIN	SPHINGOMYELINASE C PRECURSOR	LEPTOSPIRA INTERROGANS	306-57	394-421							
PPHND_ECOLI	PHND PROTEIN	ESCHERICHIA COLI	296-326								
PPHNK_ECOLI	PHNK PROTEIN	ESCHERICHIA COLI	178-205								
PPHNM_ECOLI	PHNM PROTEIN	ESCHERICHIA COLI	5-35								
PPHOE_CITFR	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	CITROBACTER FREUNDII	13-40	47-105							
PPHOE_ECOLI	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	ESCHERICHIA COLI	13-40	64-105	168-193	226-253					
PPHOE_KLEOX	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA OXYTOCA	13-40	64-91							
PPHOE_KLEPN	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA PNEUMONIAE	13-40	64-105							
PPHOE_SALTY	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	SALMONELLA TYPHIMURIUM	63-104	330-347							
PPHOP_BACSU	ALK PHOS SYNTHESIS TRANS REG PROTEIN	BACILLUS SUBTILIS	185-219								
PPHOQ_ECOLI	SENSOR PROTEIN PHOQ	ESCHERICHIA COLI	244-278								
PPHOQ_SALTY	VIRULENCE SENSOR PROTEIN PHOQ	SALMONELLA TYPHIMURIUM	226-260								
PPHOR_BACSU	ALK PHOS SYNTHESIS SENSOR PROTEIN PHOR	BACILLUS SUBTILIS	89-145	387-423							
PPHRA_ECOLI	PHOTOREPAIR PROTEIN PHRA	ESCHERICHIA COLI	63-90	207-241							
PPHRA_SYNPY	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPHRA_SYNP2	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPHSG_ECOLI	GLYCOGEN PHOSPHORYLASE	ESCHERICHIA COLI	137-184	418-515							
PPHSM_ECOLI	MALTODEXTRIN PHOSPHORYLASE	ESCHERICHIA COLI	71-108								
PPILA_NEIGO	PROB SIGNAL RECOGNITION PARTICLE PROTEIN	NEISSERIA GONORRHOEAE	17-48								
PPILB_PSEAE	FIMBRIAL ASSEMBLY PROTEIN PILB	PSEUDOMONAS AERUGINOSA	16-60								
PPILC_PSEAE	PILC PROTEIN	PSEUDOMONAS AERUGINOSA	143-170								
PPILD_NEIGO	LEADER PEPTIDASE	NEISSERIA GONORRHOEAE	110-137								
PPILQ_PSEAE	FIMBRIAL ASSEMBLY PROTEIN PILQ PRECURSOR	PSEUDOMONAS AERUGINOSA	71-115	639-666							
PPILS_PSEAE	SENSOR PROTEIN PILS	PSEUDOMONAS AERUGINOSA	9-46								
PPIR_ECOLI	PI PROTEIN	ESCHERICHIA COLI	156-188								
PPIV_MORBO	PILIN GENE INVERTING PROTEIN	MORAXELLA BOVIS	42-69	152-182							
PPIV_MORLA	PILIN GENE INVERTING PROTEIN	MORAXELLA LACUNATA	132-182								
PPLC_BACCE	PHOSPHODIESTERASE PRECURSOR	BACILLUS CEREUS	217-243								
PPLC_BACTU	PHOSPHODIESTERASE PRECURSOR	BACILLUS THURINGIENSIS	216-243								
PPLC_LISMO	PHOSPHODIESTERASE PRECURSOR	LISTERIA MONOCYTOGENES	238-265								
PPLSC_ECOLI	ACYLTRANSFERASE	ESCHERICHIA COLI	106-133								
PPLSX_ECOLI	PLSX PROTEIN	ESCHERICHIA COLI	241-270								
PPLYD_ERWCA	PECTIN LYASE	ERWINIA CAROTOVORA	27-92								
PPMBA_ECOLI	PMBA PROTEIN	ESCHERICHIA COLI	9-50								
PPME_ERWCH	PECTINESTERASE PRECURSOR	ERWINIA CHRYSANTHEMI	60-87								
PPMGY_ECOLI	PHOSPHOGLYCERATE MUTASE	ESCHERICHIA COLI	82-116								
PPMGY_ZYMM	PHOSPHOGLYCERATE MUTASE	ZYMOMONAS MOBILIS	13-40	80-110							
PPNP_ECOLI	POLYRIBONUC NUCLEOTIDYL TRANSF	ESCHERICHIA COLI	260-294								
PPNIK_SALTY	PNIK PROTEIN	SALMONELLA TYPHIMURIUM	178-205								
PPODK_BACSY	PYRUVATE,ORTHOPHOSPHATE DIKINASE	BACTEROIDES SYMBIOSUS	51-78								
PPORF_PSESY	OUTER MEMBRANE PORIN F PRECURSOR	PSEUDOMONAS SYRINGAE	111-138								
PPORO_PSEAE	PORIN O PRECURSOR	PSEUDOMONAS AERUGINOSA	390-424								
PPORP_PSEAE	PORIN P PRECURSOR	PSEUDOMONAS AERUGINOSA	119-181	260-287	369-396						
PPOTD_ECOLI	BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	330-347								
PPOTE_ECOLI	PUTRESCINE-ORNITHINE ANTIPORTER	ESCHERICHIA COLI	91-118								
PPOXB_ECOLI	PYRUVATE DEHYDROGENASE	ESCHERICHIA COLI	8-38								
PPPB1_BACSU	ALKALINE PHOSPHATASE III PRECURSOR	BACILLUS SUBTILIS	109-150	433-460							
PPPB4_BACSU	ALKALINE PHOSPHATASE IV PRECURSOR	BACILLUS SUBTILIS	81-123	336-363							
PPPB_ECOLI	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA COLI	233-262								
PPPB_ESCFE	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA FERGUSONII	236-263								
PPPCE_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	138-199								
PPPCF_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	138-199	336-363							
PPPCK_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYKINASE	ESCHERICHIA COLI	45-72								

BAD ORIGINAL

PCGENE	10:1:178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 1	AREA 2
PPPDA_CLOPE	PROTEIN A PRECURSOR	CLOSTRIDIUM PERFRINGENS	73-109								
PPSA_ECOLI	PHOSPHOENOLPYRUVATE SYNTHASE	ESCHERICHIA COLI	49-76								
PPQQ1_ACICA	COENZYME PQQ SYNTHESIS PROTEIN II	ACINETOBACTER CALCOACETICUS	40-74								
PPRCA_ANAVA	CALCIUM DEPENDENT PROTEASE PRECURSOR	ANABAENA VARIABILIS	371-398								
PPRCA_THEAC	PROTEASOME_ALPHA SUBUNIT	THERMOPLASMA ACIDOPHILUM	88-115								
PPRC_ECOLI	TAIL-SPECIFIC PROTEASE PRECURSOR	ESCHERICHIA COLI	158-192	366-393							
PPRE1_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	27-78	152-179	264-347						
PPRE1_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	48-75	181-208	310-361	366-393					
PPREA_LACPL	PLASMID RECOMBINATION ENZYME	LACTOBACILLUS PLANTARUM	37-71	291-318							
PPRE_BACLI	REGULATORY PROTEIN	BACILLUS LICHENIFORMIS	2-40								
PPRE_BACSP	PLASMID RECOMBINATION ENZYME	BACILLUS SP	181-224	288-345							
PPRE_STRAG	PLASMID RECOMBINATION ENZYME	STREPTOCOCCUS AGALACTIAE	285-319	333-359	420-454						
PPRJA_LISMO	LISTERIOLYSIN REGULATORY PROTEIN	LISTERIA MONOCYTOGENES	76-110	173-204							
PPRJA_ECOLI	PRIMOSOMAL PROTEIN N'	ESCHERICHIA COLI	218-245								
PPRJM_BACSU	DNA PRIMASE	BACILLUS SUBTILIS	383-433								
PPRJM_BUCAP	DNA PRIMASE	BUCHNERA APHIDICOLA	13-43	282-319							
PPRJM_CLOAB	DNA PRIMASE	CLOSTRIDIUM ACETOBUTYLICUM	87-114								
PPRJM_LACLA	DNA PRIMASE	LACTOCOCCUS LACTIS	269-296								
PPRJM_RICPR	DNA PRIMASE	RICKETTSIA PROWAZEKII	10-37	245-286	477-504	526-593					
PPRJS_DESDE	PRISMANE PROTEIN	DESULFOVIBRIO DESULFURICANS	30-57								
PPRLB_ACHLY	BETA-LYTIC METALLOENDOPEPTIDASE	ACHROMOBACTER LYTICUS	317-344								
PPRLB_LYSEN	BETA-LYTIC METALLOENDOPEPTIDASE	LYSOBACTER ENZYMOGENES	121-148								
PPRO1_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145	275-316							
PPRO1_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145								
PPROA_SERMA	GAMMA-GLUTAMYL PHOSPHATE REDUCTASE	SERRATIA MARCESCENS	309-336								
PPROA_STAAU	PROTEIN A PRECURSOR	STAPHYLOCOCCUS AUREUS	2-29								
PPROB_SERMA	GLUTAMATE 5-KINASE	SERRATIA MARCESCENS	2-34								
PPROB_STRAG	PROTEIN B	STREPTOCOCCUS AGALACTIAE	58-85								
PPROC_PSEAE	PYRROLINE-5-CARBOXYLATE REDUCTASE	PSEUDOMONAS AERUGINOSA	148-175								
PPROH_BACSU	PYRROLINE-5-CARBOXYLATE REDUCTASE HOMOL	BACILLUS SUBTILIS	200-227								
PPROP_ECOLI	PROLINE/BETAINE TRANSPORTER	ESCHERICHIA COLI	460-487								
PPROV_ECOLI	PERIPHERAL MEMBRANE PROTEIN PROV	ESCHERICHIA COLI	24-54								
PPROV_SALTY	PERIPHERAL MEMBRANE PROTEIN PROV	SALMONELLA TYPHIMURIUM	24-54								
PPRSB_ECOLI	PRSB PROTEIN	ESCHERICHIA COLI	170-197								
PPRSC_ECOLI	ANTICODON NUCLEASE	ESCHERICHIA COLI	282-309								
PPRSD_ECOLI	PRSD PROTEIN	ESCHERICHIA COLI	278-305								
PPRSA_BACSU	PROTEIN EXPORT PROTEIN PRSA PRECURSOR	BACILLUS SUBTILIS	51-87	93-157							
PPRTA_STRGR	PROTEASE A PRECURSOR	STREPTOMYCES GRISEUS	36-110								
PPRTC_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	103-130								
PPRTC_PORGI	COLLAGENASE PRECURSOR	PORPHYROMONAS GINGIVALIS	285-312								
PPRTD_ERWCH	PROTEASES SECRETION PROTEIN PRTD	ERWINIA CHRYSANTHEMI	328-355								
PPRTE_DACNO	EXTRACELLULAR SERINE PROTEASE PRECURSOR	BACTEROIDES NODOSUS	106-133	219-265	346-384						
PPRTE_ERWCH	PROTEASES SECRETION PROTEIN PRTE	ERWINIA CHRYSANTHEMI	108-135	138-192	231-290						
PPRTF_ERWCH	PROTEASES SECRETION PROTEIN PRTF	ERWINIA CHRYSANTHEMI	280-310								
PPRTM_LACLA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	76-103	112-139							
PPRTM_LACLC	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	26-53	76-103	112-139						
PPRTM_LACPA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOBACILLUS PARACASEI	76-103	112-139							
PPRTS_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	376-403	1007-1041						
PPRTT_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	464-491	1007-1041						
PPRTX_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	314-341								
PPSAA_SYNEN	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS ELONGATUS NAEGEL	120-147		1						
PPSAA_SYNP2	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS SP	109-136	326-356							
PPSAA_SYNVU	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS VULCANUS	120-147								
PPSAA_SYNY3	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCYSTIS SP	44-71	120-147	338-368						
PPSAD_YEAPE	CHAPERONE PROTEIN PSAD PRECURSOR	YERSINIA PESTIS	244-271								
PPSAD_SYNPA	PHOTOSYSTEM I REACTION CENTRE SUBUNIT II	SYNECHOCOCCUS SP	11-38								
PPSAE_YERPE	PSAE PROTEIN PRECURSOR	YERSINIA PESTIS	66-118								

BAD ORIGINAL

PCGENE	10:a17:b4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PPSBO_ANANI	STABILIZING POLYPEPTIDE PRECURSOR	ANACYSTIS NIDULANS	99-126	209-243							
PPSPA_ECOLI	PHAGE SHOCK PROTEIN A	ESCHERICHIA COLI	55-82								
PPSRA_WOLSU	POLYSULFIDE REDUCTASE CHAIN A PRECURSOR	WOLINELLA SUCCINOGENES	114-141								
PPS1S_ECOLI	PHOSPHATE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	40-74								
PPT1_BACSU	PHOSPHOTRANSFERASE	BACILLUS SUBTILIS	26-60								
PPT1_ECOLI	PHOSPHOTRANSFERASE	ESCHERICHIA COLI	115-162	399-426							
PPT1_SALTY	PHOSPHOTRANSFERASE	SALMONELLA TYPHIMURIUM	232-259	399-426							
PPT1_STACA	PHOSPHOTRANSFERASE	STAPHYLOCOCCUS CARNOSUS	34-61								
PPT1_STRSL	PHOSPHOTRANSFERASE	STREPTOCOCCUS SALIVARIUS	34-61	198-232							
PPT2B_ERWCH	PHOSPHOTRANSFERASE ENZYME II	ERWINIA CHRYSANTHEMI	127-154								
PPT2G_BACSU	PHOSPHOTRANSFERASE ENZYME II	BACILLUS SUBTILIS	610-697								
PPT2L_LACCA	PHOSPHOTRANSFERASE ENZYME II	LACTOBACILLUS CASEI	537-564								
PPT2L_LACLA	PHOSPHOTRANSFERASE ENZYME II	LACTOCOCCUS LACTIS	183-214	409-436							
PPT2L_STAAU	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS AUREUS	421-448	530-557							
PPT2M_ECOLI	PHOSPHOTRANSFERASE ENZYME II	ESCHERICHIA COLI	445-489								
PPT2N_STACA	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS CARNOSUS	388-415								
PPT2N_ECOLI	N-ACETYLGLUCOSAMINE-PERMEASE	ESCHERICHIA COLI	370-400								
PPT3S_STRMU	PHOSPHOTRANSFERASE ENZYME II	STREPTOCOCCUS MUTANS	600-627								
PPT3F_SALTY	PHOSPHOTRANSFERASE FPR PROTEIN	SALMONELLA TYPHIMURIUM	107-134								
PPT3L_LACCA	PHOSPHOTRANSFERASE FACTOR III	LACTOBACILLUS CASEI	40-67								
PPT3P_ECOLI	PHOSPHOCARRIER PROTEIN HPR	ESCHERICHIA COLI &	31-65								
		SALMONELLA TYPHIMURIUM									
PPT4P_KLEPN	PHOSPHOCARRIER PROTEIN HPR	KLEBSIELLA PNEUMONIAE	31-65								
PPT4B_ECOLI	PROTEASE II	ESCHERICHIA COLI	94-121	217-251							
PPULA_KLEAE	PULLULANASE	KLEBSIELLA AEROGENES	894-928								
PPULA_KLEPN	PULLULANASE	KLEBSIELLA PNEUMONIAE	894-928								
PPULO_KLEPN	LEADER PEPTIDASE	KLEBSIELLA PNEUMONIAE	178-205								
PPUL5_KLEPN	PUL5 PRECURSOR	KLEBSIELLA PNEUMONIAE	70-97								
PPURA_PSEPU	UPTAKE PROTEIN PRECURSOR	PSEUDOMONAS PUTIDA	112-162	210-237	429-463	736-763					
PPUR1_BACSU	AMIDOPHOSPHORIBOSYLTRANSF PREC	BACILLUS SUBTILIS	394-421								
PPUR2_BACSU	PHOSPHORIBOSYLAMINE--GLYCINE LIGASE	BACILLUS SUBTILIS	249-276								
PPUR3_BACSU	FORMYLTRANSFERASE	BACILLUS SUBTILIS	149-176								
PPURJ_ECOLI	FORMYLTRANSFERASE	ESCHERICHIA COLI	27-54								
PPUR4_BACSU	SYNTHASE I	BACILLUS SUBTILIS	18-45								
PPUR5_BACSU	CYCLO-LIGASE	BACILLUS SUBTILIS	153-194								
PPURA_ECOLI	AIR CARBOXYLASE	ESCHERICHIA COLI	131-158								
PPUR7_BACSU	SAICAR SYNTHETASE	BACILLUS SUBTILIS	3-43								
PPUR8_BACSU	ADENYLOSUCCINATE LYASE	BACILLUS SUBTILIS	56-130	226-253							
PPUR8_ECOLI	ADENYLOSUCCINATE LYASE	ESCHERICHIA COLI	194-221	331-372							
PPUR9_BACSU	AICAR TRANSFORMYLASE	BACILLUS SUBTILIS	19-53	345-372							
PPUR9_ECOLI	AICAR TRANSFORMYLASE	ESCHERICHIA COLI	239-268								
PPUR9_SALTY	AICAR TRANSFORMYLASE	SALMONELLA TYPHIMURIUM	218-247								
PPURL_BACSU	SYNTHASE II	BACILLUS SUBTILIS	609-636								
PPYG1_ANASP	LINKER POLYPEPTIDE CPCG1	ANABAENA SP	88-115								
PPYG1_MASLA	LINKER POLYPEPTIDE CPCG1	MASTIGOCLADUS LAMINOSUS	89-116								
PPYG2_ANASP	LINKER POLYPEPTIDE CPCG2	ANABAENA SP	88-115								
PPYG2_MASLA	LINKER POLYPEPTIDE CPCG2	MASTIGOCLADUS LAMINOSUS	89-116								
PPYG3_MASLA	LINKER POLYPEPTIDE CPCG3	MASTIGOCLADUS LAMINOSUS	91-132								
PPYG4_ANASP	LINKER POLYPEPTIDE CPCG4	ANABAENA SP	90-131								
PPYR1_ANASP	32.1 KD LINKER POLYPEPTIDE	ANABAENA SP	35-62								
PPYRJ_FREDI	27.9 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	105-132								
PPYR4_FREDI	31.6 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	22-66								
PPYR5_FREDI	31.5 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	106-143								
PPYR6_FREDI	30.8 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	43-70	113-140							
PPYRB_BACSU	ASPARTATE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	9-36								
PPYRB_SERMA	ASPARTATE CARBAMOYLTRANSFERASE	SERRATIA MARCESCENS	70-97								
PPYRD_ECOLI	DIHYDROOROTATE DEHYDROGENASE	ESCHERICHIA COLI	115-142								

BAD ORIGINAL

PCGENE	1187178r4	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PPYRD_SALTY	DIHYDROOROTATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	115-142	183-210							
PPYRO_BACSU	CTP SYNTHASE	BACILLUS SUBTILIS	275-302	322-349							
PPYSI_FREDI	PHYCOBILISOME 9.7 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	21-48								
PQOR_ECOLI	QUINONE OXIDOREDUCTASE	ESCHERICHIA COLI	180-215								
PQUEA_ECOLI	QUEUOSINE BIOSYNTHESIS PROTEIN QUEA	ESCHERICHIA COLI	234-261								
PRAK_CLOPA	34.2 KD PROTEIN IN RUBREDOXIN OPERON	CLOSTRIDIUM PASTEURIANUM	23-50	155-232							
PRACC_ECOLI	RACC PROTEIN	ESCHERICHIA COLI	5-32								
PRACO_STRTR	ASPARTATE RACEMASE	STREPTOCOCCUS THERMOPHILUS	152-189								
PRACR_BACSU	PROBABLE AMINO ACID RACEMASE	BACILLUS SUBTILIS	132-162								
PRAFA_ECOLI	ALPHA-GALACTOSIDASE	ESCHERICHIA COLI	89-116								
PRAFD_ECOLI	RAFFINOSE INVERTASE	ESCHERICHIA COLI	348-375								
PRBSC_ECOLI	RIBOSE TRANSPORT SYSTEM COMPONENT	ESCHERICHIA COLI	65-99	195-222							
PRDSK_ECOLI	RIBOKINASE	ESCHERICHIA COLI	200-239								
PRBTR_KLEAE	RUBITOL (RBT) OPERON REPRESSOR	KLEBSIELLA AEROGENES	6-47								
PRCIA_ECOLI	BIOSYNTHESIS ACTIVATION PROTEIN A	ESCHERICHIA COLI	170-197								
PRCIA_ERWAM	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA AMYLOVORA	92-119	174-201							
PRCIA_ERWST	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA STEWARTII	174-201								
PRCIA_KLEAE	BIOSYNTHESIS ACTIVATION PROTEIN A	KLEBSIELLA AEROGENES	168-205								
PRCSA_ECOLI	CAPSULE SYNTHESIS A COMPONENT	ESCHERICHIA COLI	14-41	159-186							
PRCSB_ECOLI	CAPSULE SYNTHESIS B COMPONENT	ESCHERICHIA COLI	203-230								
PREC1_LEGPN	RECA PROTEIN	LEGIONELLA PNEUMOPHILA	203-230								
PRECA_ACHLA	RECA PROTEIN	ACHOLEPLASMA LAIDLAWII	203-230								
PRECA_AGRTU	RECA PROTEIN	AGROBACTERIUM TUMEFACIENS	3-30	132-159	281-308						
PRECA_ANAVA	RECA PROTEIN	ANABAENA VARIABILIS	322-349								
PRECA_AQUPY	RECA PROTEIN	AQUIFEX PYROPHILUS	61-90	126-153							
PRECA_BACFR	RECA PROTEIN	BACTEROIDES FRAGILIS	109-135								
PRECA_BACSU	RECE PROTEIN	BACILLUS SUBTILIS	287-294								
PRECA_BRUAB	RECA PROTEIN	BRUCELLA ABORTUS	3-30	132-159	280-307						
PRECA_BURCE	RECA PROTEIN	BURKHOLDERIA CEPACIA	75-109								
PRECA_ERWCA	RECA PROTEIN	ERWINIA CAROTOVORA	284-311								
PRECA_LACDE	RECA PROTEIN	LACTOBACILLUS DELBRUECKII	20-47								
PRECA_LACHE	RECA PROTEIN	LACTOBACILLUS HELVETICUS	20-47								
PRECA_LACLA	RECA PROTEIN	LACTOCOCCUS LACTIS	135-162	232-269	288-315						
PRECA_METCL	RECA PROTEIN	METHYLOMONAS CLARA	266-303								
PRECA_METFL	RECA PROTEIN	METHYLOBACILLUS FLAGELLATUM	276-303								
PRECA_MYCPU	RECA PROTEIN	MYCOPLASMA PULMONIS	30-57								
PRECA_MYCTU	RECA PROTEIN	MYCOBACTERIUM TUBERCULOSIS	749-776								
PRECA_NEIGO	RECA PROTEIN	NEISSERIA GONORRHOEAE	263-310								
PRECA_PROMI	RECA PROTEIN	PROTEUS MIRABILIS	283-310								
PRECA_PSEAE	RECA PROTEIN	PSEUDOMONAS AERUGINOSA	283-309								
PRECA_RHILP	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	3-30	131-158	280-307						
PRECA_RHILV	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	119-146	268-295							
PRECA_RHIME	RECA PROTEIN	RHIZOBIUM MELILOTI	119-146	268-295							
PRECA_RHOSH	RECA PROTEIN	RHODOBACTER SPHAEROIDES	119-146								
PRECA_STRPN	RECA PROTEIN	STREPTOCOCCUS PNEUMONIAE	134-161	293-327							
PRECA_SYNP2	RECA PROTEIN	SYNECHOCOCCUS SP	124-151								
PRECA_VIBCH	RECA PROTEIN	VIBRIO CHOLERAE	290-317								
PRECF_BACSU	RECF PROTEIN	BACILLUS SUBTILIS	4-31	178-205							
PRECF_ECOLI	RECF PROTEIN	ESCHERICHIA COLI	82-109	147-174							
PRECF_PROMI	RECF PROTEIN	PROTEUS MIRABILIS	86-113								
PRECF_PSEPU	RECF PROTEIN	PSEUDOMONAS PUTIDA	84-111								
PRECF_SALTY	RECF PROTEIN	SALMONELLA TYPHIMURIUM	147-174								
PRECJ_ECOLI	EXONUCLEASE RECJ	ESCHERICHIA COLI	52-79								
PRECN_BACSU	RECOMBINATION PROTEIN	BACILLUS SUBTILIS	21-48	136-184	192-247	299-336	344-378				
PRECQ_ECOLI	DNA HELICASE RECQ	ESCHERICHIA COLI	468-495								
PRELA_ECOLI	GTP PYROPHOSPHOKINASE	ESCHERICHIA COLI	680-707								
PREMA_BACSU	REPLICATION AND MAINTENANCE PROTEIN	BACILLUS SUBTILIS	2-36	81-108							
PREMA_STAAU	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS AUREUS	2-36	81-108							

BAD ORIGINAL

PCGENE	1071171b4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA2	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRNA_STAEP	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	2-16	81-108							
PREP3_ECOLI	REPLICATION PROTEIN REPA	ESCHERICHIA COLI	36-77	90-117							
PREPA_BACSU	REPA PROTEIN	BACILLUS SUBTILIS	342-373								
PREPA_ECOLI	REPA PROTEIN	ESCHERICHIA COLI	91-118	228-255							
PREPA_NEIGO	REPLICATION PROTEIN	NEISSERIA GONORRHOEAE	37-84	138-172							
PREPB_LACPL	REPLICATION PROTEIN REPB	LACTOBACILLUS PLANTARUM	184-211								
PREPM_STAAU	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	254-284								
PREPN_STAAU	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	258-285								
PREPR_STRAG	REPR PROTEIN	STREPTOCOCCUS AGALACTIAE	430-467								
PREPS_STRPY	REPS PROTEIN	STREPTOCOCCUS PYOGENES	423-467								
PREPX_STAAU	REP PROTEIN	STAPHYLOCOCCUS AUREUS	111-150	172-210							
PREPY_ECOLI	REPLICATION INITIATION PROTEIN	ESCHERICHIA COLI	288-315								
PREP_CLOPE	REPLICATION PROTEIN	CLOSTRIDIUM PERFRINGENS	168-195	297-324	343-375						
PREP_ECOLI	REP HELICASE	ESCHERICHIA COLI	119-146	205-243							
PREP_LACPL	REP PROTEIN	LACTOBACILLUS PLANTARUM	119-199	260-287							
PRESP_CLOPE	RESOLVASE	CLOSTRIDIUM PERFRINGENS	68-102	151-185							
PRF3_BACSU	PROBABLE PEPTIDE CHAIN RELEASE FACTOR 2	BACILLUS SUBTILIS	34-68								
PRF2_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 2	ESCHERICHIA COLI	86-113	161-204							
PRF2_SALTY	PEPTIDE CHAIN RELEASE FACTOR 2	SALMONELLA TYPHIMURIUM	86-113	161-204							
PRF3_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 3	ESCHERICHIA COLI	180-210	443-473							
PRFAB_ECOLI	1,4-GALACTOSYLTRANSFERASE	ESCHERICHIA COLI	199-226								
PRFAG_ECOLI	BIOSYNTHESIS PROTEIN RFAG	ESCHERICHIA COLI	185-212								
PRFAJ_ECOLI	1,2-GLUCOSYLTRANSFERASE	ESCHERICHIA COLI	39-66	233-268							
PRFAJ_SALTY	1,2-GLUCOSYLTRANSFERASE	SALMONELLA TYPHIMURIUM	68-95	143-172	236-263						
PRFAK_SALTY	1,2-N-ACETYLGLUCOSAMINETRANSFERASE	SALMONELLA TYPHIMURIUM	335-369								
PRFAL_ECOLI	O-ANTIGEN LIGASE	ESCHERICHIA COLI	368-393								
PRFAL_SALTY	O-ANTIGEN LIGASE	SALMONELLA TYPHIMURIUM	326-360								
PRFAP_ECOLI	BIOSYNTHESIS PROTEIN RFAP	ESCHERICHIA COLI	8-35								
PRFAS_ECOLI	BIOSYNTHESIS PROTEIN RFAS	ESCHERICHIA COLI	62-89	184-240							
PRFAY_ECOLI	BIOSYNTHESIS PROTEIN RFAY	ESCHERICHIA COLI	18-45								
PRFAZ_ECOLI	BIOSYNTHESIS PROTEIN RFAZ	ESCHERICHIA COLI	3-30	85-112							
PRFBB_SALTY	DTDP-GLUCOSE 4,6-DEHYDRATASE	SALMONELLA TYPHIMURIUM	320-359								
PRFBM_SALTY	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	313-361								
PRFBS_SALTI	PARATOSE SYNTHASE	SALMONELLA TYPHI	22-56	205-232							
PRFEA_VIBAN	PRECURSOR FOR FERRIC ANGUIBACTIN	VIBRIO ANGUILLARUM	349-376								
PRFH_ECOLI	PEPTIDE CHAIN RELEASE FACTOR HOMOLOG	ESCHERICHIA COLI	83-110								
PRGI2_BACTU	PUTATIVE GI2 SITE-SPECIFIC RECOMBINASE	BACILLUS THURINGIENSIS	15-48	190-262	310-383						
PRHAB_ECOLI	RHAMNULOKINASE	ESCHERICHIA COLI	175-202								
PRHAB_SALTY	RHAMNULOKINASE	SALMONELLA TYPHIMURIUM	175-202								
PRHAR_ECOLI	L-RHAMNOSE OPERON TRANSACTIVATOR	ESCHERICHIA COLI	10-41								
PRHAS_ECOLI	L-RHAMNOSE OPERON REG PROTEIN RHAS	ESCHERICHIA COLI	153-179								
PRHIR_RHILV	RHIR REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	206-233								
PRHLB_ECOLI	RNA HELICASE RHLB/RNA	ESCHERICHIA COLI	138-165								
PRHO_BORBU	TRANS TERM FACTOR RHO	BORRELIA BURGDORFERI	215-242	327-369							
PRIOPR_BACSU	PROTEASE PROD REG PROTEIN HPR	BACILLUS SUBTILIS	82-109								
PRHSA_ECOLI	RHSA PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694								
PRHSB_ECOLI	RHSB PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694								
PRHSC_ECOLI	RHSC PROTEIN PRECURSOR	ESCHERICHIA COLI	380-414	667-694	1036-1083						
PRHSD_ECOLI	RHSD PROTEIN PRECURSOR	ESCHERICHIA COLI	671-712	1071-1098							
PRHSE_ECOLI	RHSE PROTEIN	ESCHERICHIA COLI	345-372								
PRIG_ECOLI	ACETYLTRANSFERASE	ESCHERICHIA COLI	93-127								
PRIRJ_ECOLI	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE	ESCHERICHIA COLI	167-194								
PRISA_PHOLE	RIBOFLAVIN SYNTHASE ALPHA CHAIN	PHOTOBACTERIUM LEIOGNATHI	2-47	131-158							
PRISB_BACSU	RIBOFLAVIN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	8-35								
PRISB_PHOLE	RIBOFLAVIN SYNTHASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	14-41								
PRL10_STRAT	50S RIBOSOMAL PROTEIN L10	STREPTOMYCES ANTIBIOTICUS	14-72	106-133							
PRL13_SYNY3	50S RIBOSOMAL PROTEIN L13	SYNECHOCYSTIS SP	2-34								

BAD ORIGINAL

PCGENE	10781864	Prokaryotic Sequences								
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PRL12_THEMA	50S RIBOSOMAL PROTEIN L12	THERMOTOGA MARITIMA	8-33	36-86						
PRL14_BACST	50S RIBOSOMAL PROTEIN L14	BACILLUS STEAROTHERMOPHILUS	18-45							
PRL14_MICLU	50S RIBOSOMAL PROTEIN L14	MICROCOCCUS LUTEUS	18-45							
PRL14_MYCCA	50S RIBOSOMAL PROTEIN L14	MYCOPLASMA CAPRICOLUM	51-93							
PRL15_BACLI	50S RIBOSOMAL PROTEIN L15	BACILLUS LICHENIFORMIS	21-48							
PRL15_BACST	50S RIBOSOMAL PROTEIN L15	BACILLUS STEAROTHERMOPHILUS	93-134							
PRL15_BACSU	50S RIBOSOMAL PROTEIN L15	BACILLUS SUBTILIS	93-122							
PRL15_CHLTR	50S RIBOSOMAL PROTEIN L15	CHLAMYDIA TRACHOMATIS	110-144							
PRL15_ECOLI	50S RIBOSOMAL PROTEIN L15	ESCHERICHIA COLI	76-111							
PRL15_LACLA	50S RIBOSOMAL PROTEIN L15	LACTOCOCCUS LACTIS	8-35							
PRL15_METVA	50S RIBOSOMAL PROTEIN L15	METHANOCOCCUS VANNIELII	68-102							
PRL15_MYCCA	50S RIBOSOMAL PROTEIN L15	MYCOPLASMA CAPRICOLUM	63-135							
PRL18_BACST	50S RIBOSOMAL PROTEIN L18	BACILLUS STEAROTHERMOPHILUS	31-58							
PRL18_CHLTR	50S RIBOSOMAL PROTEIN L18	CHLAMYDIA TRACHOMATIS	32-86							
PRL18_HALMA	50S RIBOSOMAL PROTEIN L18	HALOARCULA MARISMORTUI	80-107							
PRL18_MYCCA	50S RIBOSOMAL PROTEIN L18	MYCOPLASMA CAPRICOLUM	61-88							
PRL19_ECOLI	50S RIBOSOMAL PROTEIN L19	ESCHERICHIA COLI	35-52							
PRL19_HALMA	50S RIBOSOMAL PROTEIN L19	HALOARCULA MARISMORTUI	101-118							
PRL19_METVA	PROBABLE 50S RIBOSOMAL PROTEIN	METHANOCOCCUS VANNIELII	45-72							
PRL1_PROVU	50S RIBOSOMAL PROTEIN L1	PROTEUS VULGARIS	159-194							
PRL1_SULSO	50S RIBOSOMAL PROTEIN L1	SULFOLOBUS SOLFATARICUS	5-32	184-211						
PRL20_ECOLI	50S RIBOSOMAL PROTEIN L20	ESCHERICHIA COLI	14-41							
PRL20_MYCFE	50S RIBOSOMAL PROTEIN L20	MYCOPLASMA FERMENTANS	14-41							
PRL21_BACSU	50S RIBOSOMAL PROTEIN L21	BACILLUS SUBTILIS	4-38							
PRL22_ECOLI	50S RIBOSOMAL PROTEIN L22	ESCHERICHIA COLI	28-55							
PRL23_METVA	50S RIBOSOMAL PROTEIN L23	METHANOCOCCUS VANNIELII	30-57							
PRL23_MYCCA	50S RIBOSOMAL PROTEIN L23	MYCOPLASMA CAPRICOLUM	12-39							
PRL24_HALMA	50S RIBOSOMAL PROTEIN L24	HALOARCULA MARISMORTUI	48-75							
PRL24_METVA	50S RIBOSOMAL PROTEIN L24	METHANOCOCCUS VANNIELII	61-90							
PRL24_MICLU	50S RIBOSOMAL PROTEIN L24	MICROCOCCUS LUTEUS	30-63							
PRL29_CHLTR	50S RIBOSOMAL PROTEIN L29	CHLAMYDIA TRACHOMATIS	19-66							
PRL29_ECOLI	50S RIBOSOMAL PROTEIN L29	ESCHERICHIA COLI	36-63							
PRL29_MYCCA	50S RIBOSOMAL PROTEIN L29	MYCOPLASMA CAPRICOLUM	39-85							
PRL4_BACST	50S RIBOSOMAL PROTEIN L4	BACILLUS STEAROTHERMOPHILUS	141-168							
PRL4_MYCCA	50S RIBOSOMAL PROTEIN L4	MYCOPLASMA CAPRICOLUM	144-198							
PRL5_THETH	50S RIBOSOMAL PROTEIN L5	THERMUS AQUATICUS	38-65							
PRL6_BACST	50S RIBOSOMAL PROTEIN L6	BACILLUS STEAROTHERMOPHILUS	79-106							
PRL6_ECOLI	50S RIBOSOMAL PROTEIN L6	ESCHERICHIA COLI	19-46							
PRL6_METVA	50S RIBOSOMAL PROTEIN L6	METHANOCOCCUS VANNIELII	139-159							
PRL9_BACST	50S RIBOSOMAL PROTEIN L9	BACILLUS STEAROTHERMOPHILUS	41-77							
PRL9_ECOLI	50S RIBOSOMAL PROTEIN L9	ESCHERICHIA COLI	132-149							
PRLA0_HALCU	ACIDIC RIBOSOMAL PROTEIN PO HOMOLOG	HALOBACTERIUM CUTIRUBRUM	138-182							
PRLA0_HALMA	ACIDIC RIBOSOMAL PROTEIN PO HOMOLOG	HALOBACTERIUM HALOBIUM	64-91	133-184						
PRLA0_METVA	ACIDIC RIBOSOMAL PROTEIN PO HOMOLOG	HALOARCULA MARISMORTUI	194-221							
PRLA_HALEU	RIBOSOMAL PROTEIN 'A'	METHANOCOCCUS VANNIELII	39-86							
PRLA_HALJA	50S RIBOSOMAL PROTEIN L20	HALOPHILIC EUBACTERIUM NRCC 41227	2-29,							
PRLA_HALMA	50S RIBOSOMAL PROTEIN L12	HALOBACTERIUM HALOBIUM	2-29							
PRLA_METVA	RIBOSOMAL PROTEIN 'A'	HALOARCULA MARISMORTUI	2-29							
PRLA_MICLU	76S RIBOSOMAL PROTEIN PA	METHANOCOCCUS VANNIELII	35-82	90-117						
PRLX1_SALTY	43 KD RELAXATION PROTEIN	MICROCOCCUS LUTEUS	216-260							
PRLX1_STAAU	RLX PROTEIN	SALMONELLA TYPHIMURIUM	1-30	103-132	177-211	266-300				
PRLX2_SALTY	21 KD RELAXATION PROTEIN	STAPHYLOCOCCUS AUREUS	19-53							
PRLX3_STAAU	RLX PROTEIN	SALMONELLA TYPHIMURIUM	1-30	102-133	261-293					
PRLX3_STAAU	RLX PROTEIN	STAPHYLOCOCCUS AUREUS	1-30	146-216						
PRLX_SULSO	50S RIBOSOMAL PROTEIN LX	SULFOLOBUS SOLFATARICUS	32-62							
PRNTR_BACAM	RIBONUCLEASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	31-67	129-156						

BAD ORIGINAL

PCGENE	10/11/1994	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
PRNC_ECOLI	RIBONUCLEASE III	ESCHERICHIA COLI	10-37	117-144							
PRVE_ECOLI	RIBONUCLEASE E	ESCHERICHIA COLI	413-440	628-662							
PRPA_BUCAP	RIBONUCLEASE P PROTEIN COMPONENT	BUCHNERA APHIDICULA	85-114								
PRNPH_BACSU	RIBONUCLEASE PH	BACILLUS SUBTILIS	159-186								
PRNS_ECOLI	REGULATORY PROTEIN RNS	ESCHERICHIA COLI	116-160								
PRN_BACCI	RIBONUCLEASE	BACILLUS CIRCULANS	82-109								
PRN_BACIN	RIBONUCLEASE PRECURSOR	BACILLUS INTERMEDIUS	38-72								
PRJ28_BACTK	RNA POLYMERASE SIGMA-28 FACTOR PRECURSOR	BACILLUS THURINGIENSIS	73-107								
PRJ32_CITFR	RNA POLYMERASE SIGMA-32 FACTOR	CITROBACTER FREUNDII	30-57								
PRJ35_BACTK	RNA POLYMERASE SIGMA-35 FACTOR PRECURSOR	BACILLUS THURINGIENSIS	8-35	63-90							
PRJ54_ALCEU	RNA POLYMERASE SIGMA-54 FACTOR	ALCALIGENES EUTROPHUS	229-266								
PRJ54_AZOCA	RNA POLYMERASE SIGMA-54 FACTOR	AZORHIZOBIUM CAULINODANS	174-208								
PRJ54_BACSU	RNA POLYMERASE SIGMA-54 FACTOR	BACILLUS SUBTILIS	16-43	97-124	274-308	396-423					
PRJ54_BRAJA	RNA POLYMERASE SIGMA-54 FACTOR 1	BRADYRHIZOBIUM JAPONICUM	97-124								
PRJ54_KLEPN	RNA POLYMERASE SIGMA-54 FACTOR	KLEBSIELLA PNEUMONIAE	148-182								
PRJ54_RHOCA	RNA POLYMERASE SIGMA-54 FACTOR	RHODOBACTER CAPSULATUS	135-183								
PRJ54_BRAJA	RNA POLYMERASE SIGMA-54 FACTOR 2	BRADYRHIZOBIUM JAPONICUM	143-172								
PRJ54_ALCEU	PROBABLE SIGMA(54) MODULATION PROTEIN	ALCALIGENES EUTROPHUS	21-51								
PRJ54_ECOLI	PROBABLE SIGMA(54) MODULATION PROTEIN	ESCHERICHIA COLI	21-67								
PRJ54_SALTY	PROBABLE SIGMA(54) MODULATION PROTEIN	SALMONELLA TYPHIMURIUM	21-67								
PRJ70_BUCAP	RNA POLYMERASE SIGMA-70 FACTOR	BUCHNERA APHIDICOLA	69-96	109-136	173-217	228-255	303-337				
PRJ70_CHLTR	RNA POLYMERASE SIGMA-70 FACTOR	CHLAMYDIA TRACHOMATIS	5-32								
PRJ70_ECOLI	RNA POLYMERASE SIGMA-70 FACTOR	ESCHERICHIA COLI	337-361								
PRJ70_PSEAE	RNA POLYMERASE SIGMA-70 FACTOR	PSEUDOMONAS AERUGINOSA	334-368								
PRJ70_RICPA	RNA POLYMERASE SIGMA-70 FACTOR	RICKETTSIA PROWAZEKII	244-321	348-382							
PRJ80_MYXXA	RNA POLYMERASE SIGMA-80 FACTOR	MYXOCOCCUS XANTHUS	208-233	318-347	359-386						
PRJCF_SYNPY	BILIN BIOSYNTHESIS PROTEIN RPCF	SYNECHOCOCCUS SP	180-207								
PRJOA_BACSU	DNA-DIRECTED RNA POLYMERASE ALPHA CHAIN	BACILLUS SUBTILIS	53-107								
PRJOA_ECOLI	A-DIRECTED RNA POLYMERASE ALPHA CHAIN	ESCHERICHIA COLI A	35-105								
		SALMONELLA TYPHIMURIUM									
PRJOA_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	HALOBACTERIUM HALOBIUM	863-904								
PRJOA_HALMO	A-DIRECTED RNA POLYMERASE SUBUNIT A	HALOCOCCUS MORURUAE	329-370								
PRJOA_METTH	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	METHANOBACTERIUM THERMOAUTOTROPHICU	218-245	486-513	642-669						
PRJOA_SULAC	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	SULFOLOBUS ACIDOCALDARIUS	222-256	500-537	693-720						
PRJOA_THECE	DNA-DIRECTED RNA POLYMERASE SUBUNIT A'	THERMOCOCCUS CELER	228-262								
PRJOB_ECOLI	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	ESCHERICHIA COLI	599-636	1011-1038							
PRJOB_MYCLE	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	MYCOBACTERIUM LEPRAE	723-760	1084-1111							
PRJOB_SALTY	A-DIRECTED RNA POLYMERASE BETA CHAIN	SALMONELLA TYPHIMURIUM	599-636	931-985	1011-1038						
PRJOB_SULAC	A-DIRECTED RNA POLYMERASE SUBUNIT B	SULFOLOBUS ACIDOCALDARIUS	160-187	235-282	334-361	827-861					
PRJOB_THEMA	A-DIRECTED RNA POLYMERASE BETA CHAIN	THERMOTOGA MARITIMA	350-377								
PRJOC_ANASP	DNA-DIRECTED RNA POLYMERASE GAMMA CHAIN	ANABAENA SP	112-194								
PRJOC_ECOLI	DNA-DIRECTED RNA POLYMERASE BETA' CHAIN	ESCHERICHIA COLI	786-813	948-994	1223-1257						
PRJOC_HALJA	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	HALOBACTERIUM HALOBIUM	175-202								
PRJOC_HALMO	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	HALOCOCCUS MORURUAE	23-54	117-144	207-234						
PRJOC_METTH	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	METHANOBACTERIUM THERMOAUTOTROPHICU	58-85	222-302	123-354						
PRJOC_MYCLE	A-DIRECTED RNA POLYMERASE BETA CHAIN	MYCOBACTERIUM LEPRAE	273-300	860-887	911-938	1133-1158					
PRJOC_NOSCO	DNA-DIRECTED RNA POLYMERASE GAMMA CHAIN	NOSTOC COMMUNE	150-192								
PRJOC_SULAC	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	SULFOLOBUS ACIDOCALDARIUS	36-63	172-214	224-251						
PRJOC_THECE	DNA-DIRECTED RNA POLYMERASE SUBUNIT A'	THERMOCOCCUS CELER	21-58								
PRJOD_NOSCO	DNA-DIRECTED RNA POLYMERASE DELTA CHAIN	NOSTOC COMMUNE	72-116	402-449	539-566						
PRJOE_ECOLI	RNA POLYMERASE SIGMA-E FACTOR	ESCHERICHIA COLI	5-39								
PRJOS_ECOLI	RNA POLYMERASE SIGMA FACTOR RPOS	ESCHERICHIA COLI	211-308								
PRJOU_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT B'	HALOBACTERIUM HALOBIUM	91-118								
PRJSA_AGRTU	RNA POLYMERASE SIGMA-A FACTOR	AGROBACTERIUM TUMEFACIENS	310-347	397-427							
PRJSA_ANASP	RNA POLYMERASE SIGMA-A FACTOR	ANABAENA SP	71-105								
PRJSA_CLOAB	RNA POLYMERASE SIGMA-A FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	2-29								
PRJSA_STRAU	RNA POLYMERASE SIGMA FACTOR RPOD	STREPTOMYCES AUREOFACIENS	278-305								

BAD ORIGINAL

PCGENE	10Jul96d	Prokaryotic Sequences	AREA1	AREA1	AREA2	AREA1	AREA3	AREA1	AREA1	AREA1	AREA2
FILENAME	PROTEIN	ORGANISM									
PRP3B_ANASP	RNA POLYMERASE SIGMA-B FACTOR	ANABAENA SP	4-31								
PRP3B_BACSU	RNA POLYMERASE SIGMA-B FACTOR	BACILLUS SUBTILIS	3-33	169-196	200-230						
PRP3B_MYXXA	RNA POLYMERASE SIGMA-B FACTOR	MYXOCOCCUS XANTHUS	42-74								
PRP3B_STIAU	RNA POLYMERASE SIGMA-B FACTOR	STIGMATELLA AURANTIACA	96-123								
PRP3C_ANASP	RNA POLYMERASE SIGMA-C FACTOR	ANABAENA SP	38-85								
PRP3D_BACSU	RNA POLYMERASE SIGMA-D FACTOR	BACILLUS SUBTILIS	192-249								
PRP3E_BACSU	RNA POLYMERASE SIGMA-E FACTOR PRECURSOR	BACILLUS SUBTILIS	63-90								
PRP3E_CLOAB	RNA POLYMERASE SIGMA-E FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	14-41	116-160							
PRP3F_BACLI	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS LICHENIFORMIS	4-31	191-248							
PRP3F_BACME	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS MEGATERIUM	191-225								
PRP3F_BACSU	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS SUBTILIS	4-31	191-248							
PRP3H_BACLI	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS LICHENIFORMIS	191-218								
PRP3H_BACSU	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS SUBTILIS	186-213								
PRP3K_BACSU	RNA POLYMERASE SIGMA-K FACTOR	BACILLUS SUBTILIS	75-109	189-216							
PRP3P_STAAU	RNA POLYMERASE SIGMA FACTOR PLAC	STAPHYLOCOCCUS AUREUS	19-46								
PRP3W_STRCO	RNA POLYMERASE SIGMA FACTOR WHIG	STREPTOMYCES COELICOLOR	232-273								
PRP3X_BACTK	POSSIBLE RNA POLYMERASE SIGMA-G FACTOR	BACILLUS THURUNGIENSIS	33-60								
PRS10_ECOLI	30S RIBOSOMAL PROTEIN S10	ESCHERICHIA COLI	3-30								
PRS11_BACSU	30S RIBOSOMAL PROTEIN S11	BACILLUS SUBTILIS	8-42								
PRS13_BACSU	30S RIBOSOMAL PROTEIN S13	BACILLUS SUBTILIS	44-85								
PRS17_METVA	30S RIBOSOMAL PROTEIN S17	METHANOCOCCUS VANNIELII	34-73								
PRS1_ECOLI	30S RIBOSOMAL PROTEIN S1	ESCHERICHIA COLI	99-126	144-171							
PRS1_PROSP	30S RIBOSOMAL PROTEIN S1	PROVIDENCIA SP	39-66	265-292	349-376						
PRS1_RHIME	30S RIBOSOMAL PROTEIN S1	RHIZOBIUM MELILOTI	91-125	172-217							
PRS21_BACST	30S RIBOSOMAL PROTEIN S21	BACILLUS STEAROTHERMOPHILUS	1-28								
PRS2_SPICI	30S RIBOSOMAL PROTEIN S2	SPIROPLASMA CITRI	91-125								
PRS3_ACHLA	30S RIBOSOMAL PROTEIN S3	ACHOLEPLASMA LAIDLAWII	83-110								
PRS3_MYCCA	30S RIBOSOMAL PROTEIN S3	MYCOPLASMA CAPRICOLUM	77-106	136-163							
PRS4_ECOLI	30S RIBOSOMAL PROTEIN S4	ESCHERICHIA COLI	50-77								
PRS5_HALMA	30S RIBOSOMAL PROTEIN S5	HALOARCULA MARISMORTUI	160-187								
PRS5_MYCCA	30S RIBOSOMAL PROTEIN S5	MYCOPLASMA CAPRICOLUM	35-62	182-216							
PRS6_THETH	30S RIBOSOMAL PROTEIN S6	THERMUS AQUATICUS	16-43								
PRS7_METVA	30S RIBOSOMAL PROTEIN S7	METHANOCOCCUS VANNIELII	69-96								
PRS7_MYCLE	30S RIBOSOMAL PROTEIN S7	MYCOBACTERIUM LEPRAE	22-49								
PRS8_MICLU	30S RIBOSOMAL PROTEIN S8	MICROCOCCUS LUTEUS	103-130								
PRS8_MYCCA	30S RIBOSOMAL PROTEIN S8	MYCOPLASMA CAPRICOLUM	41-78								
PRSGA_ECOLI	FERRITIN LIKE PROTEIN	ESCHERICHIA COLI	80-107								
PRT07_ECOLI	RNA-DIRECTED DNA POLYMERASE	ESCHERICHIA COLI	223-268								
PSACB_BACAM	LEVANSUCRASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	175-202	234-281							
PSACB_BACSU	LEVANSUCRASE PRECURSOR	BACILLUS SUBTILIS	175-202	234-281							
PSACB_STRMU	LEVANSUCRASE PRECURSOR	STREPTOCOCCUS MUTANS	31-65	135-189	314-369						
PSACQ_BACLI	SACQ REGULATORY FACTOR	BACILLUS LICHENIFORMIS	2-46								
PSACT_BACSU	SACA OPERON ANTITERMINATOR	BACILLUS SUBTILIS	102-129	188-216							
PSAGP_STRPY	STREPTOCOCCAL ACID GLYCOPROTEIN	STREPTOCOCCUS PYOGENES	294-331	362-389							
PSAOX_BACSN	SARCOSINE OXIDASE	BACILLUS SP	350-377								
PSAS2_CLOBI	SPORE PROTEIN	CLOSTRIDIUM BIFERMENTANS	17-47								
PSASG_BACCE	SPORE PROTEIN GAMMA-TYPE	BACILLUS CEREUS	31-58								
PSASG_BACST	SPORE PROTEIN GAMMA-TYPE	BACILLUS STEAROTHERMOPHILUS	37-64								
PSBCC_ECOLI	EXONUCLEASE SBCC	ESCHERICHIA COLI	218-260	337-364	535-585	622-656	778-812	821-865	915-942		
PSBCD_ECOLI	EXONUCLEASE SBCD	ESCHERICHIA COLI	137-164	334-397							
PSBM_ECOLI	SBM PROTEIN	ESCHERICHIA COLI	5-32	416-470	553-580						
PSBP_BACSU	SBP PROTEIN	BACILLUS SUBTILIS	28-55								
PSCPA_STRPY	C5A PEPTIDASE PRECURSOR	STREPTOCOCCUS PYOGENES	128-160	784-811	831-880						
PSCRB_KLEPN	SUCROSE-6-PHOSPHATE HYDROLASE	KLEBSIELLA PNEUMONIAE	174-201								
PSCRD_LACLA	SUCROSE-6-PHOSPHATE HYDROLASE	LACTOCOCCUS LACTIS	182-217	334-385	395-422						
PSCRD_STRMU	SUCROSE-6-PHOSPHATE HYDROLASE	STREPTOCOCCUS MUTANS	335-362								
PSCRK_SALTH	FRUCTOKINASE	SALMONELLA THOMPSON	97-124								

BAD ORIGINAL

PCGENE	107:178:4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PSCRK_SALTY	FRUCTOKINASE	SALMONELLA TYPHIMURIUM	183-210								
PSCRY_KLEPN	SUCROSE PORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	61-88	240-267							
PSCRY_SALTY	SUCROSE PORIN PRECURSOR	SALMONELLA TYPHIMURIUM	16-54	61-88	240-267						
PSECA_BACSU	PREPROTEIN TRANSLOCASE SECA SUBUNIT	BACILLUS SUBTILIS	12-39	226-260							
PSECA_ECOLI	PREPROTEIN TRANSLOCASE SECA SUBUNIT	ESCHERICHIA COLI	360-387	453-481							
PSECB_ECOLI	PROTEIN-EXPORT PROTEIN SECB	ESCHERICHIA COLI	41-68								
PSECD_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECD	ESCHERICHIA COLI	46-73	378-412							
PSECF_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECF	ESCHERICHIA COLI	174-201								
PSECY_ECOLI	PREPROTEIN TRANSLOCASE SECY SUBUNIT	ESCHERICHIA COLI	101-128								
PSECY_LACLA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	LACTOCOCCUS LACTIS	403-430								
PSECY_METVA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	METHANOCOCCUS VANNIELII	131-161	396-423							
PSECY_STACA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	STAPHYLOCOCCUS CARNOSUS	149-191								
PSEFC_SALEN	SEFC PROTEIN PRECURSOR	SALMONELLA ENTERITIDIS	137-164	475-535							
PSERA_BACSU	D-3-PHOSPHOGLYCERATE DEHYDROGENASE	BACILLUS SUBTILIS	16-43	347-374							
PSFAA_ECOLI	S-FIMBRIAL PROTEIN SUBUNIT PRECURSOR	ESCHERICHIA COLI	11-38								
PSFSA_ECOLI	SUGAR FERMENTATION STIMULATION PROTEIN	ESCHERICHIA COLI	81-115								
PSFUA_SERMA	IRON-TRANSPORT SFUA PROTEIN PRECURSOR	SERRATIA MARCESCENS	34-61								
PSHU1_ECOLI	SHUFFLON PROTEIN A	ESCHERICHIA COLI	224-262								
PSHU2_ECOLI	SHUFFLON PROTEIN A'	ESCHERICHIA COLI	224-262								
PSHU3_ECOLI	SHUFFLON PROTEIN B	ESCHERICHIA COLI	224-262								
PSHU4_ECOLI	SHUFFLON PROTEIN B'	ESCHERICHIA COLI	224-262								
PSHU5_ECOLI	SHUFFLON PROTEIN C	ESCHERICHIA COLI	224-262	402-429							
PSHU6_ECOLI	SHUFFLON PROTEIN C'	ESCHERICHIA COLI	224-262								
PSHU7_ECOLI	SHUFFLON PROTEIN D'	ESCHERICHIA COLI	224-262								
PSINR_BACLI	SINR PROTEIN	BACILLUS LICHENIFORMIS	9-36	43-80							
PSINR_BACSU	SINR PROTEIN	BACILLUS SUBTILIS	9-36	43-70							
PSLAP_ACEKI	CELL SURFACE PROTEIN PRECURSOR	ACETOGENIUM KIVUI	237-264	282-309	313-453	458-489	517-544	563-593	641-685	726-753	
PSLPA_ECOLI	PROPHAGE CP4-57 INTEGRASE	ESCHERICHIA COLI	93-136								
PSMF_ECOLI	SMF PROTEIN	ESCHERICHIA COLI	24-51								
PSMPB_ECOLI	SMALL PROTEIN B	ESCHERICHIA COLI	27-61	90-117							
PSMP_ECOLI	SMP PROTEIN PRECURSOR	ESCHERICHIA COLI	71-98								
PSMTB_SYNP7	TRANSCRIPTIONAL REPRESSOR SMTB	SYNECHOCOCCUS SP	62-96								
PSODF_COXBU	SUPEROXIDE DISMUTASE	COXIELLA BURNETII	116-143								
PSODF_ECOLI	SUPEROXIDE DISMUTASE	ESCHERICHIA COLI	115-142								
PSODF_METTH	SUPEROXIDE DISMUTASE	METHANOBACTERIUM THERMOAUTOTROPHICU	25-52								
PSODF_PHOLE	SUPEROXIDE DISMUTASE	PHOTOBACTERIUM LEIOGNATHI	22-63								
PSODM_PROFR	SUPEROXIDE DISMUTASE	PROPIONIBACTERIUM FREUDENREICHII	164-191								
PSOHB_ECOLI	SOHB PROTEIN PRECURSOR	ESCHERICHIA COLI	7-48	70-97	273-300						
PSOPB_ECOLI	SOPB PROTEIN	ESCHERICHIA COLI	252-279								
PSOXR_ECOLI	SOXR PROTEIN	ESCHERICHIA COLI	10-63								
PSPOJ_BACSU	STAGE 0 SPORULATION PROTEIN J	BACILLUS SUBTILIS	131-158								
PSP2A_BACME	STAGE II SPORULATION PROTEIN AA	BACILLUS MEGATERIUM	19-53								
PSP2A_BACSU	STAGE II SPORULATION PROTEIN AA	BACILLUS SUBTILIS	21-55								
PSP2B_BACLI	STAGE II SPORULATION PROTEIN AB	BACILLUS LICHENIFORMIS	42-69								
PSP2B_BACME	STAGE II SPORULATION PROTEIN AB	BACILLUS MEGATERIUM	36-73								
PSP2D_BACSU	STAGE II SPORULATION PROTEIN D	BACILLUS SUBTILIS	134-161								
PSP2G_BACTK	POSSIBLE ASPARTYL PROTEASE	BACILLUS THURINGIENSIS	4-36	117-144							
PSP2J_BACSU	STAGE II SPORULATION PROTEIN J	BACILLUS SUBTILIS	14-44	463-500							
PSP3D_BACSU	STAGE III SPORULATION PROTEIN D	BACILLUS SUBTILIS	9-36	52-86							
PSP3J_BACSU	STAGE III SPORULATION PROTEIN J PRECURSOR	BACILLUS SUBTILIS	44-75								
PSP4A_BACSU	STAGE IV SPORULATION PROTEIN A	BACILLUS SUBTILIS	139-180								
PSP4B_BACSU	STAGE IV SPORULATION PROTEIN B	BACILLUS SUBTILIS	39-66								
PSP4Q_BACSU	STAGE IV SPORULATION PROTEIN FB	BACILLUS SUBTILIS	251-278								
PSP5A_BACSU	STAGE V SPORULATION PROTEIN AF	BACILLUS SUBTILIS	9-36								
PSPAA_STRDO	ANTIGEN I	STREPTOCOCCUS DOWNEI	184-218								
PSPAB_BACSU	SUBTILIN BIOSYNTHESIS 117 KD PROTEIN	BACILLUS SUBTILIS	181-208								
PSPAC_BACSU	SUBTILIN BIOSYNTHESIS PROTEIN SPAC	BACILLUS SUBTILIS	311-338								

BAD ORIGINAL

PEGENE	3D:117bt4	Prokaryotic Sequence										
FULLNAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	
PSPAX_BACSU	SENSOR PROTEIN SPAX	BACILLUS SUBTILIS	86-107	224-251	290-324							
PSPAJ_STRAU	CELL SURFACE ANTIGEN I/II PRECURSOR	STREPTOCOCCUS MUTANS	122-176	281-465	538-565	576-630	1071-1098	1135-1182	1377-1430			
PSPAB_BACSU	REGULATORY PROTEIN	BACILLUS SUBTILIS	4-31	133-199								
PSPAT_BACSU	SUBTILIN TRANSPORT PROTEIN SPAT	BACILLUS SUBTILIS	55-82	226-267								
PSPEC_STUVY	EXOTOXIN TYPE C PRECURSOR	STREPTOCOCCUS PYOGENES	12-39									
PSPIR_SPICI	SPIRALIN	SPIROPLASMA CITRI	81-109	135-182								
PSPIR_SPIME	SPIRALIN	SPIROPLASMA MELLIFERUM	195-222									
PSPOT_ECOLI	GUAN-3',5'-BISDIPHOS) 3'-PYROPHOSPHOHYDROLA	ESCHERICHIA COLI	637-664									
PSPPA_ECOLI	PROTEASE IV	ESCHERICHIA COLI	278-303									
PSQHC_ZYMMO	SQUALENE-HOPENE CYCLASE	ZYMOMONAS MOBILIS	590-617									
PSRFA_BACSU	SURFACTIN SYNTHETASE SUBUNIT A	BACILLUS SUBTILIS	139-186	244-271								
PSRPJ_ECOLI	SIGNAL RECOGNITION PARTICLE PROTEIN	ESCHERICHIA COLI	301-328									
PSRPJ_MYCMY	SIGNAL RECOGNITION PARTICLE PROTEIN	MYCOPLASMA MYCOIDES	21-65	107-141	394-428							
PSSAI_PASHA	SEROTYPE-SPECIFIC ANTIGEN I PRECURSOR	PASTEURELLA HAEMOLYTICA	131-178	338-385	465-518	529-570	860-904					
PSSAB_STRPA	ADHESIN B PRECURSOR	STREPTOCOCCUS PARASANGUIS	33-59									
PSSAB_STRSA	ADHESIN B PRECURSOR	STREPTOCOCCUS SANGUIS	21-59	101-128								
PSSB_ECOLI	SINGLE-STRAND BINDING PROTEIN	ESCHERICHIA COLI	68-95									
PSSB_PROMI	SINGLE-STRAND BINDING PROTEIN	PROTEUS MIRABILIS	61-104									
PSSB_SERMA	SINGLE-STRAND BINDING PROTEIN	SERRATIA MARCESCENS	61-104									
PSSP1_STRSA	AGGLUTININ RECEPTOR PRECURSOR	STREPTOCOCCUS SANGUIS	1131-1173	1178-1217	1293-1413	1565-1592	1676-1710	1081-1131				
PSTAV_STRAV	STREPTAVIDIN PRECURSOR	STREPTOMYCES AVIDINII	123-152									
PSTA_ECOLI	STREPTOTHRICIN ACETYLTRANSFERASE	ESCHERICHIA COLI	66-93									
PSTCI_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-119	1173-1199	1280-1311							
PSTCJ_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-117	264-291								
PSTC_CLOBE	L-TRANSD TRANSC CONTROL PROTEIN	CLOSTRIDIUM BEIJERINCKII	47-74									
PSTPA_ECOLI	STPA PROTEIN	ESCHERICHIA COLI	36-63									
PSTRI_STRGA	INOSAMINE-PHOSPHATE AMIDINOTRANSFERASE I	STREPTOMYCES GRISEUS	183-210									
PSTRP_STREQ	STREPTOKINASE C PRECURSOR	STREPTOCOCCUS EQUISIMILIS	209-236	281-308								
PSTRP_STRPY	STREPTOKINASE A PRECURSOR	STREPTOCOCCUS PYOGENES	209-236									
PSTRP_STRSP	STREPTOKINASE G PRECURSOR	STREPTOCOCCUS SP	209-236	281-308								
PSUBE_BACSU	MINOR EXTRACELLULAR PROTEASE EPR PREC	BACILLUS SUBTILIS	415-462	522-563	603-639							
PSUBF_BACSU	BACILLOPEPTIDASE F PRECURSOR	BACILLUS SUBTILIS	40-67	89-116	121-148	534-597						
PSUBI_SALTY	SULFATE-BINDING PROTEIN	SALMONELLA TYPHIMURIUM	37-74									
PSUBI_SYNY3	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCOCCUS SP	61-94									
PSUBI_SYNY3	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCYSTIS SP	64-91									
PSUBT_BACLI	SUBTILISIN CARLSBERG PRECURSOR	BACILLUS LICHENIFORMIS	191-222									
PSUBT_BACMS	SUBTILISIN	BACILLUS MESENTERICUS	91-118									
PSUBT_BACS9	SUBTILISIN PRECURSOR	BACILLUS SP	36-63	256-277								
PSUBT_BACSA	SUBTILISIN AMYLOSACCHARITICUS PRECURSOR	BACILLUS SUBTILIS	197-224									
PSUBT_BACSD	SUBTILISIN	BACILLUS SUBTILIS	86-117									
PSUBT_BACST	SUBTILISIN J PRECURSOR	BACILLUS STEAROTHERMOPHILUS	197-224									
PSUBT_BACSU	SUBTILISIN E PRECURSOR	BACILLUS SUBTILIS	197-224									
PSUBV_BACSU	MINOR EXTRACELLULAR PROTEASE VPR PRECUR	BACILLUS SUBTILIS	35-108	613-634	741-768							
PSUCC_ECOLI	SUCCINYL-COA SYNTHETASE BETA	ESCHERICHIA COLI	63-89									
PSUCP_AGAVI	SUCROSE PHOSPHORYLASE	AGROBACTERIUM VITIS	449-476									
PSULA_ENTAE	CELL DIVISION INHIBITOR	ENTEROBACTER AEROGENES	112-139									
PSYA_ECOLI	ALANYL-TRNA SYNTHETASE	ESCHERICHIA COLI	237-287	723-752	790-821							
PSYD_ECOLI	ASPARTYL-TRNA SYNTHETASE	ESCHERICHIA COLI	330-357									
PSYE_BACST	GLUTAMYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	49-76									
PSYE_BACSU	GLUTAMYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	49-76	331-386								
PSYE_THETH	GLUTAMYL-TRNA SYNTHETASE	THERMUS AQUATICUS	405-432									
PSYFA_BACSU	PHENYLALANYL-TRNA SYNTHETASE A CHAIN	BACILLUS SUBTILIS	7-34									
PSYFB_BACSU	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	BACILLUS SUBTILIS	340-367	407-441								
PSYFB_ECOLI	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	346-373	607-634	744-771							
PSYGB_ECOLI	GLYCYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	334-381	487-514								
PSYH_STREQ	HISTIDYL-TRNA SYNTHETASE	STREPTOCOCCUS EQUISIMILIS	376-403									
PSYI_METTH	ISOLEUCYL-TRNA SYNTHETASE	METHANOBACTERIUM THERMOAUTOTROPHICU	1010-1037									

BAD ORIGINAL

PEGENE	107a17b4	Prokaryotic Sequence								
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
P5YK1_ECOLI	LYSYL-TRNA SYNTHETASE	ESCHERICHIA COLI	283-310							
P5YK2_ECOLI	LYSYL-TRNA SYNTHETASE, HEAT INDUCIBLE	ESCHERICHIA COLI	45-72	283-310						
P5YL_ECOLI	LEUCYL-TRNA SYNTHETASE	ESCHERICHIA COLI	220-247							
P5YM_BACST	METHIONYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	69-99							
P5YN_ECOLI	METHIONYL-TRNA SYNTHETASE	ESCHERICHIA COLI	87-124							
P5YP_ECOLI	PROLYL-TRNA SYNTHETASE	ESCHERICHIA COLI	341-368							
P5YQ_ECOLI	GLUTAMINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	394-421							
P5YRD_PSESY	SYRD PROTEIN	PSEUDOMONAS SYRINGAE	449-483							
P5YR_ECOLI	ARGINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	540-574							
P5YT1_BACSU	THREONYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	401-438	601-639						
P5YV_BACST	VALYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	601-630	809-843						
P5YV_ECOLI	VALYL-TRNA SYNTHETASE	ESCHERICHIA COLI	300-327	882-912	924-951					
P5YW_BACST	TRYPTOPHANYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	204-231	239-266						
P5YY1_BACSU	TYROSYL-TRNA SYNTHETASE 1	BACILLUS SUBTILIS	81-115	373-409						
P5YY2_BACSU	TYROSYL-TRNA SYNTHETASE 2	BACILLUS SUBTILIS	69-96							
P5YY_BACCA	TYROSYL-TRNA SYNTHETASE	BACILLUS CALDOTENAX	295-322	372-416						
P5YY_BACST	TYROSYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	295-322	372-416						
P71M1_ECOLI	ENZYME ECOK1249 1 M PROTEIN	ESCHERICHIA COLI	126-167	405-432	485-512					
P71R1_ECOLI	ENZYME ECOK1249 R PROTEIN	ESCHERICHIA COLI	30-57	821-851	702-736	768-795	843-870	966-1000		
P71R_ECOLI	ENZYME ECOK I R PROTEIN	ESCHERICHIA COLI	158-185							
P71S1_ECOLI	ENZYME ECOK1249 1 SPECIFICITY PROTEIN	ESCHERICHIA COLI	134-181							
P71SA_ECOLI	ENZYME ECOA I SPECIFICITY PROTEIN	ESCHERICHIA COLI	219-306							
P71SB_ECOLI	ENZYME ECOB I SPECIFICITY PROTEIN	ESCHERICHIA COLI	216-312							
P71SD_ECOLI	ENZYME ECOD I SPECIFICITY PROTEIN	ESCHERICHIA COLI	249-283							
P71SE_ECOLI	ENZYME ECOE I SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306							
P71S_SALPO	ENZYME SPECIFICITY PROTEIN	SALMONELLA POTSDAM	306-423							
P71S_SALTY	ENZYME SPECIFICITY PROTEIN	SALMONELLA TYPHIMURIUM	194-221	276-304	402-429					
P72I7_ECOLI	TYPE IIS RESTRICTION ENZYME ECO57I	ESCHERICHIA COLI	138-196	265-295	406-440	639-682	687-728	926-954		
P72A1_ACICA	TYPE II RESTRICTION ENZYME ACCI	ACINETOBACTER CALCOACETICUS	49-76							
P72BF_BACSU	TYPE II RESTRICTION ENZYME BSUFI	BACILLUS SUBTILIS	3-43	133-223	236-280					
P72BR_BACSU	TYPE II RESTRICTION ENZYME BSURI	BACILLUS SUBTILIS	3-45	338-384	401-430	532-559				
P72C1_CITFR	TYPE II RESTRICTION ENZYME CFRBI	CITROBACTER FREUNDII	35-62							
P72C1_HERAU	TYPE II RESTRICTION ENZYME HGICI	HERPETOSIPHON AURANTIACUS	176-215							
P72C2_HERAU	TYPE II RESTRICTION ENZYME HGICII	HERPETOSIPHON AURANTIACUS	240-273							
P72D1_DESDN	TYPE II RESTRICTION ENZYME DDEI	DESULFOVIBRIO DESULFURICANS	85-122							
P72D1_STRPN	TYPE II RESTRICTION ENZYME DPNI	STREPTOCOCCUS PNEUMONIAE	213-240							
P72E1_ECOLI	TYPE II RESTRICTION ENZYME ECORI	ESCHERICHIA COLI	2-29							
P72E2_ECOLI	TYPE II RESTRICTION ENZYME ECORII	ESCHERICHIA COLI	333-360							
P72E5_ECOLI	TYPE II RESTRICTION ENZYME ECOAV	ESCHERICHIA COLI	128-155	214-241						
P72F1_FLAOK	TYPE IIS RESTRICTION ENZYME FOKI	FLAVOBACTERIUM OKEANOKOITES	302-336							
P72H1_HAEIN	TYPE II RESTRICTION ENZYME HINFI	HAEMOPHILUS INFLUENZAE	6-38	69-96						
P72III_HAEPA	TYPE II RESTRICTION ENZYME HPAI	HAEMOPHILUS PARAINFLUENZAE	77-125							
P72III_HAEIA	TYPE II RESTRICTION ENZYME HAEIII	HAEMOPHILUS HAEMOLYTICUS	23-50							
P72H2_HAEIN	TYPE II RESTRICTION ENZYME HINCII	HAEMOPHILUS INFLUENZAE	97-138							
P72K1_KLEPN	TYPE II RESTRICTION ENZYME KPNI	KLEBSIELLA PNEUMONIAE	18-45	178-205						
P72M1_MORBO	TYPE II RESTRICTION ENZYME MBOI	MORAXELLA BOVIS	154-61	187-215	225-252					
P72M2_MORBO	TYPE IIS RESTRICTION ENZYME MBOII	MORAXELLA BOVIS	3-30	158-185	337-364					
P72MZ_METTF	POSSIBLE TYPE II RESTRICTION ENZYME MTHZI	METHANOBACTERIUM THERMOFORMICICUM	103-151							
P72NG_NEIGO	TYPE II RESTRICTION ENZYME NGOPII	NEISSERIA GONORRHOEAE	117-144	231-258						
P72S1_STRSA	TYPE II RESTRICTION ENZYME SSI1	STREPTOCOCCUS SANGUIS	5-32	41-68	393-446					
P72S2_SHISO	TYPE II RESTRICTION ENZYME SSOII	SHIGELLA SONNEI	206-243	258-288						
P72S3_STAAU	TYPE II RESTRICTION ENZYME SAUJAI	STAPHYLOCOCCUS AUREUS	70-102							
P72S1_SALTY	TYPE II RESTRICTION ENZYME SINI	SALMONELLA INFANTIS	144-181							
P72SM_SERMA	TYPE II RESTRICTION ENZYME SMAI	SERRATIA MARCESCENS	61-88							
P72TA_THEAQ	TYPE II RESTRICTION ENZYME TAQI	THERMUS AQUATICUS	147-181	203-237						
P73M0_ECOLI	SYSTEM ECOP15 ENZYME MOD	ESCHERICHIA COLI	32-71	75-102	216-296	378-405				
P73RE_BACCE	SYSTEM ENZYME RES	BACILLUS CEREUS	62-89	236-283						

BAD ORIGINAL

PCGENE	10/31/94	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PTA47_TREPA	47 KD MEMBRANE ANTIGEN PRECURSOR	TREPONEMA PALLIDUM	26-53								
PTA53_TREDE	53 KD MEMBRANE ANTIGEN A PRECURSOR	TREPONEMA DENTICOLA	99-126	298-329							
PTACY_BACAL	ALVEOLYSIN PRECURSOR	BACILLUS ALVEI	272-302	374-401							
PTACY_CLOPE	PERFRINGOLYSIN O PRECURSOR	CLOSTRIDIUM PERFRINGENS	270-311	372-434							
PTACY_LISIV	IVANOLYSIN PRECURSOR	LISTERIA IVANOVII	93-120	167-193	396-423						
PTACY_LISMO	LISTEROLYSIN O PRECURSOR	LISTERIA MONOCYTOGENES	98-125	168-196	395-329	397-424					
PTACY_LISSE	SEELIGERIOLYSIN PRECURSOR	LISTERIA SEELIGERI	99-126	296-323	349-376	398-463					
PTACY_STRPN	PNEUMOLYSIN	STREPTOCOCCUS PNEUMONIAE	234-272								
PTACY_STRPY	STREPTOLYSIN O PRECURSOR	STREPTOCOCCUS PYOGENES	86-133	333-382	440-470						
PTAGB_BACSU	TEICHOIC ACID BIOSYN PROTEIN B PREC	BACILLUS SUBTILIS	42-69								
PTAGC_BACSU	TEICHOIC ACID BIOSYNTHESIS PROTEIN C	BACILLUS SUBTILIS	348-375								
PTAGE_BACSU	TEICHOIC ACID BIOSYNTHESIS PROTEIN E	BACILLUS SUBTILIS	59-93	144-181	185-243	565-592	600-627				
PTAGF_BACSU	TEICHOIC ACID BIOSYNTHESIS PROTEIN F	BACILLUS SUBTILIS	182-209								
PTBPI_NEIGO	TRANSFERRIN-BINDING PROTEIN I PRECURSOR	NEISSERIA GONORRHOEAE	39-73	137-164	398-423	810-841					
PTBUD_PSEPI	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS PICKETTII	218-65	227-254	375-402						
PTCDT_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN TCDT	SALMONELLA TYPHIMURIUM	109-132								
PTCHC_VIBCH	MEMBRANE PROTEIN TCPC PRECURSOR	VIBRIO CHOLERAE	20-47	83-128	199-233	263-290	344-375	459-486			
PTCPE_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPE	VIBRIO CHOLERAE	24-59	77-111							
PTCPF_VIBCH	TCP PILUS SECRETION PROTEIN TCPF	VIBRIO CHOLERAE	32-66	211-238							
PTCPH_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPH	VIBRIO CHOLERAE	93-122								
PTCPI_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPI	VIBRIO CHOLERAE	25-52	234-261	279-306	346-379					
PTCPN_VIBCH	TCP PILUS VIRULENCE REGULATORY PROTEIN	VIBRIO CHOLERAE	48-75								
PTCPO_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPO	VIBRIO CHOLERAE	230-257								
PTCPY_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPY	VIBRIO CHOLERAE	121-148								
PTCPZ_VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPZ	VIBRIO CHOLERAE	44-85								
PTCRJ_BACSU	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS SUBTILIS	404-434								
PTCR_BACST	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS STEAROTHERMOPHILUS	432-453								
PTCR_STAAU	TETRACYCLINE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	404-431								
PTCR_STRAG	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS AGALACTIAE	422-453								
PTCR_STRPN	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS PNEUMONIAE	422-453								
PTDCA_ECOLI	TDCA/DC OPERON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	210-239								
PTDCC_ECOLI	TDCC PROTEIN	ESCHERICHIA COLI	334-361								
PTEEA_STRPY	TRYPSIN-RESIST SURFACE 76 PROTEIN PREC	STREPTOCOCCUS PYOGENES	137-164	361-393	400-437						
PTEIJ_ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS B	ESCHERICHIA COLI	8-36								
PTER4_ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS D	ESCHERICHIA COLI	183-210								
PTERA_ALCSP	TELLURIUM RESISTANCE PROTEIN TERA	ALCALIGENES SP	48-86								
PTESB_ECOLI	ACYL-COA THIOESTERASE II	ESCHERICHIA COLI	4-31								
PTET3_ENTFA	TETRACYCLINE RESISTANCE PROTEIN TET(M)	ENTEROCOCCUS FAECALIS	2-36	130-159	179-206	217-244					
PTET9_ENTFA	TETRACYCLINE RESISTANCE PROTEIN TET(M)	ENTEROCOCCUS FAECALIS	2-36	130-159	217-244	266-287					
PTETC_ECOLI	TRANSPOSON TN10 TETC PROTEIN	ESCHERICHIA COLI	72-106	116-138							
PTETM_STRLI	TETRACYCLINE RESISTANCE PROTEIN	STREPTOMYCES LIVIDANS	82-109								
PTETM_UREUR	TETRACYCLINE RESISTANCE PROTEIN TET(M)	UREAPLASMA UREALYTICUM	2-36	130-159	217-244	266-287					
PTETO_CAMCO	TETRACYCLINE RESISTANCE PROTEIN TET(O)	CAMPYLOBACTER COLI	2-29								
PTETO_CAMJE	TETRACYCLINE RESISTANCE PROTEIN TET(O)	CAMPYLOBACTER JEJUNI	2-36								
PTETO_STRMU	TETRACYCLINE RESISTANCE PROTEIN TET(O)	STREPTOCOCCUS MUTANS	2-29								
PTETX_BACFR	TETRACYCLINE RESISTANCE PROTEIN	BACTEROIDES FRAGILIS	33-62								
PTETX_CLOTE	TETANUS TOXIN PRECURSOR	CLOSTRIDIUM TETANI	274-304	540-567	615-642	692-719	985-1012	1240-1277			
PTF3D_PYRWO	TRANS INITIATION FACTOR IIB HOMOLOG	PYROCOCCUS WOESEI	218-238								
PTFDC_ALCEU	CHLOROCATECHOL 1,2-DIOXYGENASE	ALCALIGENES EUTROPHUS	2-33								
PTGT_ECOLI	QUEUINE TRNA-RIBOSYLTRANSFERASE	ESCHERICHIA COLI	171-200								
PTHD1_LACLA	THREONINE DEHYDRATASE BIOSYNTHETIC	LACTOCOCCUS LACTIS	265-303								
PTHD1_ECOLI	THREONINE DEHYDRATASE CATABOLIC	ESCHERICHIA COLI	293-320								
PTHDF_BACSU	FURAN OXIDATION PROTEIN THDF	BACILLUS SUBTILIS	153-180	192-216	282-316	391-418					
PTHDF_ECOLI	FURAN OXIDATION PROTEIN THDF	ESCHERICHIA COLI	224-260	404-431							
PTHDF_PSEPU	FURAN OXIDATION PROTEIN THDF	PSEUDOMONAS PUTIDA	226-260								
PTHER_BACCE	THERMOLYSIN	BACILLUS CEREUS	4-38	240-267							
PTHER_BACST	THERMOLYSIN PRECURSOR	BACILLUS STEAROTHERMOPHILUS	45-72								

BAD ORIGINAL

PCGENE	10/1/1/1/1	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PTHEA_BACTH	THERMOLYSIN	BACILLUS THERMOPROTEOLYTICUS	86-113								
PTHET_THEVU	THERMITASE	THERMOACTINOMYCES VULGARIS	131-161								
PTHIC_ECOLI	THIC PROTEIN	ESCHERICHIA COLI	273-303	301-328							
PTHIG_ECOLI	THIG PROTEIN	ESCHERICHIA COLI	138-165								
PTHPS_SULAC	THERMOPSIN PRECURSOR	SULFOLOBUS ACIDOCALDARIUS	135-172	199-233							
PTHRC_BRELA	THREONINE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	288-315								
PTHTR_SACER	PUTATIVE THIOSULFATE SULFURTRANSFERASE	SACCHAROPOLYSPORA ERYTHRAEA	69-96								
PTIG_ECOLI	TRIGGER FACTOR	ESCHERICHIA COLI	144-171								
PTNPA_TREPA	TREPONEMAL MEMBRANE PROTEIN A PRECURSOR	TREPONEMA PALLIDUM	236-266								
PTNPB_TREPA	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PALLIDUM	44-71								
PTNPB_TREPH	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PHAGEDENIS	41-68								
PTNAB_ECOLI	LOW AFFINITY TRYPTOPHAN PERMEASE	ESCHERICHIA COLI	74-108								
PTNP4_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	52-79	322-349							
PTNP7_ENTFA	TRANSPOSON TN917 RESOLVASE	ENTEROCOCCUS FAECALIS	59-97	111-138							
PTNPA_STAAU	TRANSPOSASE A	STAPHYLOCOCCUS AUREUS	131-178								
PTNPB_STAAU	TRANSPOSASE B	STAPHYLOCOCCUS AUREUS	589-633								
PTNP1_BACTU	TN9 1 RESOLVASE	BACILLUS THURINGIENSIS	7-42	65-92	174-201						
PTNSB_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSB	ESCHERICHIA COLI	99-126	310-337							
PTNSC_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSC	ESCHERICHIA COLI	32-59	314-341							
PTNSD_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSD	ESCHERICHIA COLI	339-366								
PTNSE_ECOLI	TRANSPOSON TN7 TRANSPOSITION PROTEIN TNSE	ESCHERICHIA COLI	463-490								
PTOD1_PSEPU	TOLUENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PTOD2_PSEPU	TOLUENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	118-153								
PTODA_PSEPU	TOLUENE 1,2-DIOXYGENASE SYSTEM	PSEUDOMONAS PUTIDA	179-213								
PTODJ_PSEPU	TODF PRODUCT HYDRATASE	PSEUDOMONAS PUTIDA	143-170								
PTOLA_ECOLI	TOLA PROTEIN	ESCHERICHIA COLI	101-138								
PTOLC_ECOLI	OUTER MEMBRANE PROTEIN TOLC PRECURSOR	ESCHERICHIA COLI	144-178	184-211	239-266	348-375	383-443				
PTOP1_SYNP7	DNA TOPOISOMERASE I	SYNECHOCOCCUS SP	203-230								
PTORA_ECOLI	TRIMETHYLAMINE-N-OXIDE REDUCTASE	ESCHERICHIA COLI	797-824								
PTOX1_BORPE	PERTUSSIS TOXIN SUBUNIT 1 (S1) PRECURSOR	BORDETELLA PERTUSSIS	178-206								
PTOX2_BORPE	PERTUSSIS TOXIN SUBUNIT 2 (S2) PRECURSOR	BORDETELLA PERTUSSIS	58-85								
PTOXA_CLODI	TOXIN A	CLOSTRIDIUM DIFFICILE	20-48	99-159	204-231	342-369	373-414	847-962	966-994	997-1024	1348-1402
PTOXA_PSEAE	EXOTOXIN A PRECURSOR	PSEUDOMONAS AERUGINOSA	470-497								
PTOXB_CLODI	TOXIN B	CLOSTRIDIUM DIFFICILE	38-72	133-163	199-241	823-869	933-950	1334-1388	1403-1433	1506-1565	1716-1747
PTOXS_VIBCH	TRANSMEMBRANE REGULATORY PROTEIN TOXS	VIBRIO CHOLERAE	13-40								
PTPF1_TREPA	ANTIGEN TPF1	TREPONEMA PALLIDUM	106-141								
PTPI5_ECOLI	TRIOSEPHOSPHATE ISOMERASE	ESCHERICHIA COLI	83-110								
PTPI5_MORSP	TRIOSEPHOSPHATE ISOMERASE	MORAXELLA SP	139-166								
PTPR_PORGI	THIOL PROTEASE PRECURSOR	PORPHYROMONAS GINGIVALIS	117-144								
PTRJM_AGRTJ	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	301-329							
PTRJM_AGRTU	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	301-329							
PTRJM_PSESS	TRYPTOPHAN 2-MONOOXYGENASE	PSEUDOMONAS SYRINGAE	41-68								
PTRA1_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	58-113								
PTRA2_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	11-38	58-113							
PTRAJ_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	721-755								
PTRAJ_RHIME	TRANSPOSASE	RHIZOBIUM MELILOTI	178-206								
PTRA3_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	33-60	68-95							
PTRA4_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	181-208	308-340	720-734						
PTRA6_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	51-78								
PTRA6_SHISO	TRANSPOSASE	SHIGELLA SONNEI	51-78	200-227	231-258						
PTRA7_ECOLI	TRANSPOSASE	ESCHERICHIA COLI	729-756								
PTRA9_MYCTU	PUTATIVE TRANSPOSASE	MYCOBACTERIUM TUBERCULOSIS	159-186								
PTRAB_BACTB	IS231B PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_BACTB	IS231C PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_STAAU	TRANSPOSASE	STAPHYLOCOCCUS AUREUS	4-31	45-72							
PTRAX_BACTB	IS231 PROBABLE TRANSPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRA_BACTU	TRANSPOSASE	BACILLUS THURINGIENSIS	93-127	309-339							

BAD ORIGINAL

PCGENE	1871178.4	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PTRA_PSEAE	TRANSPOSASE	PSEUDOMONAS AERUGINOSA	127-154	721-755						
PTRB1_ECOLI	TRAB PROTEIN	ESCHERICHIA COLI	113-143							
PTRDF_ECOLI	TRDF PROTEIN	ESCHERICHIA COLI	12-39							
PTRB1_ECOLI	TRB1 PROTEIN	ESCHERICHIA COLI	36-97							
PTRC1_ECOLI	TRAC-1 PROTEIN	ESCHERICHIA COLI	1006-1058							
PTRC2_ECOLI	TRAC-2 PROTEIN	ESCHERICHIA COLI	1102-1149							
PTRC3_ECOLI	TRAC-3 PROTEIN	ESCHERICHIA COLI	884-931							
PTRD1_ECOLI	TRAD PROTEIN	ESCHERICHIA COLI	297-348							
PTREA_ECOLI	PERIPLASMIC TREHALASE PRECURSOR	ESCHERICHIA COLI	382-403	477-508						
PTREC_ECOLI	ANYLOTREHALASE	ESCHERICHIA COLI	280-307							
PTRFA_ECOLI	TRFA TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	5-32	105-132						
PTRG1_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	61-88	630-657	831-858	885-895				
PTRG3_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	196-223							
PTRGA_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	195-222	511-545						
PTRJ1_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	135-209	597-624	887-914	1330-1377				
PTRJ2_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	135-209	597-624	887-914	1330-1377				
PTRJ1_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	47-74	324-371						
PTRJ4_ECOLI	TRAJ PROTEIN	ESCHERICHIA COLI	36-63							
PTRM8_ECOLI	TRAM PROTEIN	ESCHERICHIA COLI	5-32							
PTRNA_ECOLI	TRNA (URACIL-5-)METHYLTRANSFERASE	ESCHERICHIA COLI	107-137							
PTRND_ECOLI	TRNA (GUANINE-N1-)METHYLTRANSFERASE	ESCHERICHIA COLI	115-142	226-253						
PTRPA_BACSU	TRYPTOPHAN SYNTHASE ALPHA CHAIN	BACILLUS SUBTILIS	220-247							
PTRPA_CAUCR	TRYPTOPHAN SYNTHASE ALPHA CHAIN	CAULOBACTER CRESCENTUS	241-275							
PTRPA_PSEAE	TRYPTOPHAN SYNTHASE ALPHA CHAIN	PSEUDOMONAS AERUGINOSA	176-203							
PTRPD_ACICA	TRYPTOPHAN SYNTHASE BETA CHAIN	ACINETOBACTER CALCOACETICUS	79-113							
PTRPB_BACSU	TRYPTOPHAN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	76-103	318-345						
PTRPB_BRELA	TRYPTOPHAN SYNTHASE BETA CHAIN	BREVIBACTERIUM LACTOFERMENTUM	172-199							
PTRPB_LACCA	TRYPTOPHAN SYNTHASE BETA CHAIN	LACTOBACILLUS CASEI	83-117							
PTRPB_LACLA	TRYPTOPHAN SYNTHASE BETA CHAIN	LACTOCOCCUS LACTIS	77-104	164-191						
PTRPD_VIBPA	TRYPTOPHAN SYNTHASE BETA CHAIN	VIBRIO PARAHAEMOLYTICUS	56-83							
PTRPC_BRELA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	229-256							
PTRPC_ECOLI	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	ESCHERICHIA COLI	205-232							
PTRPC_LACLA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	LACTOCOCCUS LACTIS	148-175							
PTRPC_VIBPA	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	VIBRIO PARAHAEMOLYTICUS	346-376							
PTRPD_ACICA	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	ACINETOBACTER CALCOACETICUS	233-260	260-294						
PTRPD_PSEFL	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	PSEUDOMONAS AERUGINOSA	205-232							
PTRPD_PSEFU	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	PSEUDOMONAS PUTIDA	205-232							
PTRPD_VIBPA	ANTHRANILATE PHOSPHORIBOSYLTRANSFERASE	VIBRIO PARAHAEMOLYTICUS	2-29							
PTRPE_BACPU	ANTHRANILATE SYNTHASE COMPONENT I	BACILLUS PUMILUS	33-60							
PTRPE_CLOTM	ANTHRANILATE SYNTHASE COMPONENT I	CLOSTRIDIUM THERMOCELLUM	165-226							
PTRPE_LACLA	ANTHRANILATE SYNTHASE COMPONENT II	LACTOCOCCUS LACTIS	142-191							
PTRPE_LEPPA	ANTHRANILATE SYNTHASE COMPONENT I	LEPTOSPIRA INTERROGANS	145-179							
PTRPE_RHIME	ANTHRANILATE SYNTHASE	RHIZOBIUM MELILOTI	139-166							
PTRPE_SALTY	ANTHRANILATE SYNTHASE COMPONENT I	SALMONELLA TYPHIMURIUM	191-218							
PTRPE_SULSO	ANTHRANILATE SYNTHASE COMPONENT I	SULFOLOBUS SOLFATARICUS	143-183	298-328						
PTRPE_VIBPA	ANTHRANILATE SYNTHASE COMPONENT II	VIBRIO PARAHAEMOLYTICUS	9-36	34-81						
PTRPG_ACICA	ANTHRANILATE SYNTHASE COMPONENT II	ACINETOBACTER CALCOACETICUS	12-39							
PTRPG_AZOBR	ANTHRANILATE SYNTHASE COMPONENT II	AZOSPIRILLUM BRASILENSE	4-31							
PTRPG_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	ESCHERICHIA COLI	5-32							
PTRPG_LACLA	ANTHRANILATE SYNTHASE COMPONENT II	LACTOCOCCUS LACTIS	4-31							
PTRPG_PSEAE	ANTHRANILATE SYNTHASE COMPONENT II	PSEUDOMONAS AERUGINOSA	12-39							
PTRPG_SALTY	ANTHRANILATE SYNTHASE COMPONENT II	SALMONELLA TYPHIMURIUM	5-32							
PTRPG_SERMA	ANTHRANILATE SYNTHASE COMPONENT II	SERRATIA MARCESCENS	9-43							
PTRPG_SHIDY	ANTHRANILATE SYNTHASE COMPONENT II	SHIGELLA DYSENTERIAE	5-32							
PTRPO_PSEAE	PUTATIVE TRANSCRIPTIONAL REGULATOR	PSEUDOMONAS AERUGINOSA	147-174							
PTRS1_ECOLI	TRAS PROTEIN	ESCHERICHIA COLI	85-119							
PTRT1_ECOLI	RESISTANCE PROTEIN PRECURSOR	ESCHERICHIA COLI	184-221							

BAD ORIGINAL

PCGENE	1187a13a4	Prokaryotic Sequences								
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2	AREA2	AREA2
PTRY1_SALTY	TRAY PROTEIN	SALMONELLA TYPHIMURIUM	30-57							
PTRYP_STROR	TRYPSIN PRECURSOR	STREPTOMYCES GRISEUS	106-107							
PTSR_STRAZ	RNA METHYLTRANSFERASE	STREPTOMYCES AZUREUS	126-153							
PTSST_STAAU	TOXIC SHOCK SYNDROME TOXIN-1 PRECURSOR	STAPHYLOCOCCUS AUREUS	29-43	102-129						
PTSX_ECOLI	CHANNEL-FORMING PROTEIN TSX PRECURSOR	ESCHERICHIA COLI	225-252							
PTTK_ECOLI	HYPOTHETICAL 24.3 KD PROTEIN	ESCHERICHIA COLI	81-115							
PTUS_ECOLI	SITE-BINDING PROTEIN	ESCHERICHIA COLI	37-91	107-134						
PTYCA_BACBR	TYROCIDINE SYNTHETASE I	BACILLUS BREVIS	117-147	534-561	1018-1051					
PTYT1_TREPE	ANTIGEN TYT1	TREPONEMA PERTENUE	106-143							
PTYRA_BACSU	POSSIBLE PREPHENATE DEHYDROGENASE	BACILLUS SUBTILIS	244-271	312-342						
PTYRA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	329-370							
PTYRR_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN TYRR	ESCHERICHIA COLI	481-510							
PTYSY_LACCA	THYMIDYLATE SYNTHASE	LACTOBACILLUS CASEI	139-173							
PTYSY_LACLA	THYMIDYLATE SYNTHASE	LACTOCOCCUS LACTIS	75-109							
PTYSY_STAAU	THYMIDYLATE SYNTHASE	STAPHYLOCOCCUS AUREUS	69-96							
PUHPB_ECOLI	SENSOR PROTEIN UHPB	ESCHERICHIA COLI	276-303	316-343						
PUHPB_SALTY	SENSOR PROTEIN UHPB	SALMONELLA TYPHIMURIUM	276-303	316-343						
PUHUC_SALTY	UHUC PROTEIN	SALMONELLA TYPHIMURIUM	204-231							
PUPP_ECOLI	URACIL PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	30-57							
PURAA_ECOLI	URACIL PERMEASE	ESCHERICHIA COLI	350-384							
PURE1_HELPY	UREASE ALPHA SUBUNIT	HELICOBACTER PYLORI	15-42							
PUREI_PROMI	UREASE ALPHA SUBUNIT	PROTEUS MIRABILIS	72-99							
PUREI_PROVU	UREASE ALPHA SUBUNIT	PROTEUS VULGARIS	72-99							
PUREI_UREUR	UREASE ALPHA SUBUNIT	UREAPLASMA UREALYTICUM	13-40	483-511						
PUREJ_HELPY	UREASE BETA SUBUNIT	HELICOBACTER PYLORI	62-99							
PURED_HELPY	UREASE OPERON URED PROTEIN	HELICOBACTER PYLORI	17-44							
PUREE_PROMI	UREASE ACCESSORY PROTEIN UREE	PROTEUS MIRABILIS	37-84							
PUREF_KLEAE	UREASE ACCESSORY PROTEIN UREF PRECURSOR	KLEBSIELLA AEROGENES	20-47							
PUS45_LACLA	SECRETED 45 KD PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	44-98	130-223	276-303					
PUSHA_ECOLI	P-SUGAR HYDROLASE PRECURSOR	ESCHERICHIA COLI	56-83							
PUSHA_SALTY	SILENT PROTEIN USHA(0) PRECURSOR	SALMONELLA TYPHIMURIUM	56-83							
PUVRA_ECOLI	EXCINUCLEASE ABC SUBUNIT A	ESCHERICHIA COLI	327-354	871-898						
PUVRA_MICLU	EXCINUCLEASE ABC SUBUNIT A	MICROCOCCUS LUTEUS	559-606	619-646	684-718	922-949				
PUVRA_PARDE	EXCINUCLEASE ABC SUBUNIT A	PARACOCCUS DENITRIFICANS	33-60							
PUVRC_BACSU	EXCINUCLEASE ABC SUBUNIT C	BACILLUS SUBTILIS	342-372	511-538						
PUVRC_ECOLI	EXCINUCLEASE ABC SUBUNIT C	ESCHERICHIA COLI	237-64	332-362						
PUVRD_ECOLI	HELICASE II	ESCHERICHIA COLI	280-307							
PVANA_ENTFC	VANCOMYCIN RESISTANCE PROTEIN VANA	ENTEROCOCCUS FAECIUM	183-209							
PVANC_ENTGA	VANCOMYCIN RESISTANCE PROTEIN VANC	ENTEROCOCCUS GALLINARUM	177-211							
PVIB4_AGRT5	VIRB4 PROTEIN PRECURSOR	AGROBACTERIUM TUMEFACIENS	138-172							
PVIB8_AGRT5	VIRB8 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-237							
PVIB4_AGRT6	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-237							
PVIB8_AGRT9	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-237							
PVIBX_AGRT1	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239						
PVIBX_AGRT6	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	211-238						
PVIBX_AGRT9	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239						
PVICI_AGRAA	VIRC1 PROTEIN	AGROBACTERIUM RHIZOGENES TUMEFACIENS	81-108							
PVICI_AGRT1	VIRC1 PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108							
PVICI_AGRT6	VIRC1 PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108							
PVID1_AGRAA	VIRD1 PROTEIN	AGROBACTERIUM RHIZOGENES	149-178	285-292						
PVIRA_AGRT6	WIDE HOST RANGE (VIRA) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	43-76	113-147	637-664					
PVIRA_AGRT6	WIDE HOST RANGE (VIRA) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	631-680					
PVIRA_AGRT9	WIDE HOST RANGE (VIRA) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	631-680					
PVIRB_SHIFL	VIRB TRANSCRIPTIONAL ACTIVATOR	SHIGELLA FLEXNERI	37-71	107-134	187-214	232-291				
PVIRF_YEREN	VIRULENCE REGULON TRANSACTIVATOR	YERSINIA ENTEROCOLITICA	16-46							
PVIRG_AGRAA	VIRG REGULATORY PROTEIN	AGROBACTERIUM RHIZOGENES	14-41							
PVIRL_AGRT6	LIMITED HOST RANGE (VIRL) VIRA PROTEIN	AGROBACTERIUM TUMEFACIENS	106-137							

BAD ORIGINAL

PCGENE	107s178s4	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVISC_ECOLI	VISC PROTEIN	ESCHERICHIA COLI	47-74								
PVLPA_MYCHR	VARIANT SURFACE ANTIGEN A PRECURSOR	MYCOPLASMA HYORHINIS	74-112								
PVM03_BORHE	OUTER MEMBRANE LIPOPROTEIN 3 PRECURSOR	BORRELIA HERMSII	54-81								
PVM07_BORHE	OUTER MEMBRANE LIPOPROTEIN 7 PRECURSOR	BORRELIA HERMSII	332-359								
PVM21_BORHE	OUTER MEMBRANE LIPOPROTEIN 21 PRECURSOR	BORRELIA HERMSII	330-357								
PVM24_BORHE	OUTER MEMBRANE LIPOPROTEIN 24 PRECURSOR	BORRELIA HERMSII	47-143								
PVM25_BORHE	OUTER MEMBRANE LIPOPROTEIN 25 PRECURSOR	BORRELIA HERMSII	313-356								
PVNFA_AZOVI	NITROGEN FIXATION PROTEIN VNFA	AZOTOBACTER VINELANDII	158-188	218-245							
PVNFK_AZOCH	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER CHROOCOCCUM MCD 1	68-95								
PVNFK_AZOVI	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER VINELANDII	68-95	372-403							
PVRP2_SALCH	65 KD VIRULENCE PROTEIN	SALMONELLA CHOLERAE-SUIS	509-536								
PVRP2_SALDU	65 KD VIRULENCE PROTEIN	SALMONELLA DUBLIN	511-538								
PVSDE_SALDU	VIRULENCE PROTEIN VSDE	SALMONELLA DUBLIN	3-36								
PVVHB_VIBVU	CYTOLYSIN SECRETION PROTEIN	VIBRIO VULNIFICUS	30-73								
PWAPA_STRMU	WALL-ASSOCIATED PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	4-41	313-346							
PWRBA_ECOLI	TRP REPRESSOR BINDING PROTEIN	ESCHERICHIA COLI	89-116								
PX191_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PX192_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PX193_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PXISA_ANASP	EXCISASE A	ANABAENA SP	4-31	89-116	135-162						
PXPRB_ECOLI	POSSIBLE INTEGRASE/RECOMBINASE XPRB	ESCHERICHIA COLI	268-295								
PXYLA_STAXY	XYLOSE ISOMERASE	STAPHYLOCOCCUS XYLOSUS	411-438								
PXYLK_KLEAE	XYLULOSE KINASE	KLEBSIELLA AEROGENES	2-29								
PXYLK_LACPE	XYLULOSE KINASE	LACTOBACILLUS PENTOSUS	52-79	211-238	260-287						
PXYLK_STAXY	XYLULOSE KINASE	STAPHYLOCOCCUS XYLOSUS	4-31	96-130	209-236	246-273					
PXYLR_BACSU	XYLOSE REPRESSOR	BACILLUS SUBTILIS	75-102	260-287							
PXYLR_LACPE	XYLOSE REPRESSOR	LACTOBACILLUS PENTOSUS	262-289								
PXYLR_STAXY	XYLOSE REPRESSOR	STAPHYLOCOCCUS XYLOSUS	20-64	101-138	181-215	221-255	274-301				
PXYLZ_PSEPU	ELECTRON TRANSFER COMPONENT	PSEUDOMONAS PUTIDA	51-78	104-131							
PXYN4_CALSA	PUTATIVE ENDO-1,4-BETA-XYLANASE	CALDOCELLUM SACCHAROLYTICUM	198-225								
PXYNA_BACCI	O-1,4-BETA-XYLANASE PRECURSOR	BACILLUS CIRCULANS	47-74								
PXYNA_BACSS	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SP	173-200								
PXYNA_BACSU	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SUBTILIS	47-74								
PXYNA_CALSA	ENDO-1,4-BETA-XYLANASE A PRECURSOR	CALDOCELLUM SACCHAROLYTICUM	132-159	226-256							
PXYNA_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	33-82								
PXYNB_BACPU	BETA-XYLOSIDASE	BACILLUS PUMILUS	459-486								
PXYNB_CALSA	BETA-XYLOSIDASE	CALDOCELLUM SACCHAROLYTICUM	440-474								
PXYNB_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	251-278	317-344	475-502					
PXYNC_PSEFL	ALPHA-L-ARABINOFURANOSIDASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	251-278							
PXYNC_STRLI	ENDO-1,4-BETA-XYLANASE C PRECURSOR	STREPTOMYCES LIVIDANS	183-210								
PY14K_HALMO	HYPOTHETICAL 14.9 KD PROTEIN	HALOCOCCUS MORRHUAE	56-83								
PY23K_STROR	HYPOTHETICAL 23.1 KD PROTEIN	STREPTOCOCCUS ORALIS	78-105								
PYJ6K_METSM	HYPOTHETICAL 36.7 KD PROTEIN	METHANOBREVIDACTER SMITHII	128-162	172-218							
PYAAC_ECOLI	HYPOTHETICAL 34.6 KD PROTEIN	ESCHERICHIA COLI	271-298								
PYAAC_PSEFL	HYPOTHETICAL 33.9 KD PROTEIN	PSEUDOMONAS FLUORESCENS	274-301								
PYAAM_ECOLI	HYPOTHETICAL 59.1 KD PROTEIN	ESCHERICHIA COLI	45-72								
PYAAP_ECOLI	HYPOTHETICAL 56.6 KD PROTEIN	ESCHERICHIA COLI	352-379								
PYAAQ_ECOLI	HYPOTHETICAL 28.5 KD PROTEIN	ESCHERICHIA COLI	155-182								
PYABC_ECOLI	HYPOTHETICAL 34.9 KD PROTEIN	ESCHERICHIA COLI	131-158								
PYABQ_ECOLI	HYPOTHETICAL 89.7 KD PROTEIN	ESCHERICHIA COLI	446-480	627-654							
PYABN_ECOLI	HYPOTHETICAL 63.9 KD PROTEIN	ESCHERICHIA COLI	428-455								
PYAC3_PSEAE	HYPOTHETICAL 23.9 KD PROTEIN	PSEUDOMONAS AERUGINOSA	48-75	150-177							
PYAD2_CLOAB	HYPOTHETICAL 21.6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	75-109	114-144							
PYAD3_CLOAB	HYPOTHETICAL 36.9 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	132-159	165-196	210-237						
PYAD6_CLOAB	HYPOTHETICAL PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	21-55								
PYADA_YEREN	INVASIN PRECURSOR	YERSINIA ENTEROCOLITICA	196-230	247-274	318-381						
PYADA_YERPS	INVASIN PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	255-282	297-360							

BAD ORIGINAL

PGENE"	107:1784	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PYADC_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	13-40	101-131						
PYAEA_RICRI	17 KD PROTEIN	RICKETTSIA RICKETTSII	107-134							
PYAFB_ECOLI	HYPOTHETICAL 28.4 KD PROTEIN	ESCHERICHIA COLI	221-248							
PYAFD_ECOLI	HYPOTHETICAL 39.1 KD PROTEIN	ESCHERICHIA COLI	34-71							
PYAFE_ECOLI	HYPOTHETICAL 23.0 KD PROTEIN	ESCHERICHIA COLI	123-130							
PYAIB_ESCFE	HYPOTHETICAL PROTEIN	ESCHERICHIA FERGUSONII	2-35							
PYAMI_SALTY	PUTATIVE AMIDASE	SALMONELLA TYPHIMURIUM	72-100							
PYATI_SYNY3	HYPOTHETICAL 13.0 KD PROTEIN	SYNECHOCYSTIS SP	26-60							
PYATP_MYCLE	HYPO PROTEIN PUTATIVE ATP OPERON	MYCOBACTERIUM LEPRAE	23-57	91-138	511-538					
PYATR_BACFI	HYPOL ATP-BINDING TRANSPORT PROTEIN	BACILLUS FIRMUS	211-238							
PYATS_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	7-41							
PYATU_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	29-56	60-87						
PYAV5_XANCV	HYPOTHETICAL 30 KD AVIRULENCE PROTEIN	XANTHOMONAS CAMPESTRIS	68-98	199-226						
PYBAH_ECOLI	HYPOTHETICAL 24.8 KD PROTEIN	ESCHERICHIA COLI	49-79							
PYBBA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	6-69							
PYBED_ECOLI	HYPOTHETICAL 9.3 KD PROTEIN	ESCHERICHIA COLI	31-82							
PYBID_ECOLI	HYPOTHETICAL 14.1 KD PROTEIN	ESCHERICHIA COLI	97-124							
PYCAE_ECOLI	HYPOTHETICAL 24.5 KD PROTEIN	ESCHERICHIA COLI	34-61							
PYCBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	38-65							
PYCBL_BACUN	HYPOTHETICAL 17.3 KD PROTEIN	BACTEROIDES UNIFORMIS	66-100							
PYCEA_BACLA	HYPOTHETICAL PROTEIN	BACILLUS LAUTUS	111-138							
PYCFC_ECOLI	HYPOTHETICAL 22.9 KD PROTEIN	ESCHERICHIA COLI	32-79							
PYCHR_ALCEU	HYPOTHETICAL PROTEIN	ALCALIGENES EUTROPHUS	21-48							
PYCIB_ECOLI	HYPOTHETICAL 20.8 KD PROTEIN	ESCHERICHIA COLI	16-43							
PYCIF_ECOLI	18.6 KD PROTEIN	ESCHERICHIA COLI	7-68	124-166						
PYCIK_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	35-62							
PYCLI_ECOLI	HYPOTHETICAL 45.3 KD PROTEIN	ESCHERICHIA COLI	54-81							
PYCPJ_SYNPY	HYPOTHETICAL 39.3 KD PROTEIN	SYNECHOCOCCUS SP	194-221							
PYCPJ_SYNY3	HYPOTHETICAL 28.0 KD PROTEIN	SYNECHOCYSTIS SP	7-34	120-154						
PYCPJ_SYNY3	HYPOTHETICAL 39.5 KD PROTEIN	SYNECHOCYSTIS SP	273-308							
PYCPG_MASLA	HYPOTHETICAL PROTEIN	MASTIGOCLADUS LAMINOSUS	2-29							
PYCPY_PSEAE	HYPO PHYCOCYANIN OPERON PROTEIN Y	PSEUDANABAENA SP	380-407							
PYCRJ_BACTK	HYPOTHETICAL 29.1 KD PROTEIN	BACILLUS THURINGIENSIS	42-74	133-180						
PYCSJ_ECOLI	HYPOTHETICAL PROTEIN PRECURSOR	ESCHERICHIA COLI	33-59							
PYCWJ_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	3-30	59-86						
PYDJM_HERAU	HYPOTHETICAL 68.4 KD PROTEIN	HERPETOSIPHON AURANTIACUS	12-39	131-138	360-416					
PYDBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	13-66	117-144	163-216	233-267	295-329	438-485	676-717	1116-1163 1498-1530
PYDDD_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	80-107							
PYDDB_ECOLI	HYPOTHETICAL 84.7 KD PROTEIN	ESCHERICHIA COLI	606-641	683-714	726-753					
PYDDC_ECOLI	HYPOTHETICAL 80.8 KD PROTEIN	ESCHERICHIA COLI	373-400	421-452	621-648					
PYDDD_ECOLI	HYPOTHETICAL 24.1 KD PROTEIN	ESCHERICHIA COLI	133-174							
PYDEH_ECOLI	HYPOTHETICAL 20.5 KD PROTEIN	ESCHERICHIA COLI	96-130							
PYDEJ_ECOLI	HYPOTHETICAL 18.3 KD PROTEIN	ESCHERICHIA COLI	4-38							
PYDEK_ECOLI	HYPOTHETICAL 65.5 KD PROTEIN	ESCHERICHIA COLI	333-360	524-551	565-592					
PYDNN_BORBU	HYPOTHETICAL 11.2 KD PROTEIN	BORRELIA BURGDORFERI	5-26							
PYDOI_SULSO	HYPOTHETICAL 14.7 KD PROTEIN	SULFOLOBUS SOLFATARICUS	17-38	71-103						
PYDOJ_SULSO	HYPOTHETICAL 16.9 KD PROTEIN	SULFOLOBUS SOLFATARICUS	11-38							
PYEBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	93-120							
PYEBO_ECOLI	HYPOTHETICAL 10.7 KD PROTEIN	ESCHERICHIA COLI	50-77							
PYEEE_ECOLI	HYPOTHETICAL 30.1 KD PROTEIN	ESCHERICHIA COLI	43-70							
PYEEF_ECOLI	HYPO 49.8 KD TRANSPORT PROTEIN	ESCHERICHIA COLI	147-174							
PYEOA_ECOLI	HYPOTHETICAL 0N DCD 3'REGION	ESCHERICHIA COLI	145-172							
PYEHA_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN	ESCHERICHIA COLI	69-106	283-310						
PYEHB_ECOLI	HYPOTHETICAL 92.3 KD PROTEIN	ESCHERICHIA COLI	131-178	501-545						
PYEID_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN	ESCHERICHIA COLI	96-123							
PYEIIF_ECOLI	HYPOTHETICAL 141.0 KD PROTEIN	ESCHERICHIA COLI	343-370							
PYEIII_ECOLI	HYPOTHETICAL 138.1 KD PROTEIN	ESCHERICHIA COLI	35-70	102-139						

BAD ORIGINAL

PCGENE	Identified	Prokaryotic Sequences									
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2	AREA1	AREA2
PYEHU_ECOLI	HYPOTHETICAL 43 1 KD PROTEIN	ESCHERICHIA COLI	326-393								
PYEIC_ECOLI	HYPOTHETICAL 33 6 KD PROTEIN	ESCHERICHIA COLI	46-80								
PYEIF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	61-88								
PYEIJ_ECOLI	HYPOTHETICAL 43 4 KD PROTEIN	ESCHERICHIA COLI	13-42								
PYEJA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	83-110								
PYEJF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	453-480								
PYEJO_ECOLI	HYPOTHETICAL 91 2 KD PROTEIN	ESCHERICHIA COLI	399-433								
PYEJD_ECOLI	HYPOTHETICAL 40 6 KD PROTEIN	ESCHERICHIA COLI	175-202								
PYEJ2_BACST	HYPOTHETICAL 30 6 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	133-160								
PYEJX_BRAJA	HYPOTHETICAL PROTEIN	BRADYRHIZOBIUM JAPONICUM	109-136								
PYGAP_BACME	HYPOTHETICAL 33 7 KD PROTEIN	BACILLUS MEGATERIUM	40-67								
PYGFD_ECOLI	HYPOTHETICAL 39 4 KD PROTEIN	ESCHERICHIA COLI	214-241								
PYGGB_ECOLI	HYPOTHETICAL 30 9 KD PROTEIN	ESCHERICHIA COLI	225-252								
PYGGO_ECOLI	HYPOTHETICAL 31 8 KD PROTEIN	ESCHERICHIA COLI	209-236								
PYGI3_BACTU	HYPOTHETICAL 23 8 KD PROTEIN	BACILLUS THURINGIENSIS	26-61								
PYGI3_PSEPU	HYPOTHETICAL 32 4 KD PROTEIN	PSEUDOMONAS PUTIDA	145-172								
PYGIF_ECOLI	HYPOTHETICAL 48 4 KD PROTEIN	ESCHERICHIA COLI	223-264								
PYGL4_BACST	HYPOTHETICAL 35 5 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	6-33								
PYGL5_BACST	HYPOTHETICAL PROTEIN	BACILLUS STEAROTHERMOPHILUS	182-209								
PYGLN_BACCE	HYPOTHETICAL 15 KD PROTEIN	BACILLUS CEREUS	79-124								
PYGRD_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	20-47								
PYGNE_BACSU	HYPOTHETICAL 20 6 KD PROTEIN	BACILLUS SUBTILIS	84-111								
PYGAP_BACSU	HYPOTHETICAL 39.0 KD PROTEIN	BACILLUS SUBTILIS	98-125								
PYGAP_CLOAB	HYPOTHETICAL 38 8 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	184-210								
PYGI2_STRMU	HYPOTHETICAL PROTEIN 2	STREPTOCOCCUS MUTANS	4-40	110-131	235-262						
PYHAB_ECOLI	HYPOTHETICAL 20 6 KD PROTEIN	ESCHERICHIA COLI	20-46								
PYHAC_ECOLI	HYPOTHETICAL 49.2 KD PROTEIN	ESCHERICHIA COLI	69-96								
PYHAF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	44-71	138-165							
PYHBG_ECOLI	PROBABLE ABC TRANSPORTER	ESCHERICHIA COLI	176-203								
PYIBG_PSEPU	PROBABLE ABC TRANSPORTER	PSEUDOMONAS PUTIDA	74-101	106-133	147-174						
PYIBG_THIFE	PROBABLE ABC TRANSPORTER	THIOBACILLUS FERROOXIDANS	113-140								
PYHDF_ECOLI	HYPOTHETICAL 55 4 KD PROTEIN	ESCHERICHIA COLI	267-297								
PYHEM_BACSU	HYPOTHETICAL 31.0 KD PROTEIN	BACILLUS SUBTILIS	223-253								
PYHEI_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	72-99								
PYHHA_ECOLI	HYPOTHETICAL 16 6 KD PROTEIN	ESCHERICHIA COLI	56-84								
PYHHG_ECOLI	HYPOTHETICAL 15.1 KD PROTEIN	ESCHERICHIA COLI	43-77								
PYHHR_ECOLI	HYPOTHETICAL 14.5 KD PROTEIN	ESCHERICHIA COLI	43-73								
PYHII_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	163-194								
PYHID_LACLA	HYPOTHETICAL 38.0 KD PROTEIN	LACTOCOCCUS LACTIS	90-124	132-159							
PYHIB_LACLA	HYPOTHETICAL 30.7 KD PROTEIN	LACTOCOCCUS LACTIS	92-148								
PYHIB_LACLA	HYPOTHETICAL 30.7 KD PROTEIN	LACTOCOCCUS LACTIS	77-104	136-183							
PYHIA_STAAU	HYPOTHETICAL PROTEIN	STAPHYLOCOCCUS AUREUS	18-67								
PYHIB_VIBCH	HYPOTHETICAL 18 3 KD PROTEIN	VIBRIO CHOLERAE	99-126								
PYHAF_METTE	HYPOTHETICAL 32.2 KD PROTEIN	METHANOTHERMUS FERVIDUS	106-133								
PYHSI_CLOAB	HYPOTHETICAL 11.0 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	41-85								
PYHSA_CLOAB	HYPOTHETICAL 30 6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	98-125								
PYHSC_CLOAB	HYPOTHETICAL 42 4 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	25-52	208-235	276-310						
PYHV1_LACDE	HYPOTHETICAL PROTEIN	LACTOBACILLUS HELVETICUS	93-120	137-154							
PYHYA_PSESN	HYPOTHETICAL PROTEIN	PSEUDOMONAS SP	217-266								
PYIII_HALHA	HYPOTHETICAL 38.0 KD PROTEIN	HALOBACTERIUM HALOBIUM	145-272								
PYIJ2_MYCTU	IS986 HYPOTHETICAL 6.6 KD PROTEIN	MYCOBACTERIUM TUBERCULOSIS	19-46								
PYIQ1_PSEAY	HYPOTHETICAL 42.6 KD PROTEIN	PSEUDOMONAS AMYLODERAMOSA	9-36								
PYIR4_METTH	ISMT1 HYPOTHETICAL 48.3 KD PROTEIN	METHANOBREVIBACTER SMITHII	73-100	134-184	338-365						
PYIS2_HALHA	HYPOTHETICAL 31 KD PROTEIN	HALOBACTERIUM HALOBIUM	16-113								
PYIDB_ECOLI	HYPOTHETICAL 34.0 KD PROTEIN	ESCHERICHIA COLI	202-239								
PYIDD_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	9-43								
PYIBF_ECOLI	HYPOTHETICAL 22.6 KD PROTEIN	ESCHERICHIA COLI	131-158								

BAD ORIGINAL

PGGENE	1007:1784	Prokaryotic Sequences									
GENENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PYIBQ_ECOLI	HYPOTHETICAL 11.1 KD PROTEIN	ESCHERICHIA COLI	70-97								
PYICC_ECOLI	HYPOTHETICAL 33.3 KD PROTEIN	ESCHERICHIA COLI	143-170								
PYICD_ECOLI	HYPOTHETICAL 31.1 KD PROTEIN	ESCHERICHIA COLI	138-159								
PYICH_ECOLI	HYPOTHETICAL 61.3 KD PROTEIN	ESCHERICHIA COLI	408-435								
PYICI_ECOLI	HYPOTHETICAL 60.1 KD PROTEIN	ESCHERICHIA COLI	138-149								
PYICN_ECOLI	HYPOTHETICAL 11.2 KD PROTEIN	ESCHERICHIA COLI	76-103								
PYICO_ECOLI	HYPOTHETICAL 49.9 KD PROTEIN	ESCHERICHIA COLI	320-347								
PYIDB_ECOLI	HYPOTHETICAL 13.8 KD PROTEIN	ESCHERICHIA COLI	34-78								
PYIDE_ECOLI	HYPOTHETICAL 58.9 KD PROTEIN	ESCHERICHIA COLI	86-113	183-209	277-304						
PYIDI_ECOLI	HYPOTHETICAL 13.7 KD PROTEIN	ESCHERICHIA COLI	56-83								
PYIDK_ECOLI	HYPOTHETICAL 62.1 KD PROTEIN	ESCHERICHIA COLI	2-39								
PYIDP_ECOLI	HYPOTHETICAL 21.2 KD PROTEIN	ESCHERICHIA COLI	63-97								
PYIEA_ECOLI	HYPOTHETICAL 49.2 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYIEC_ECOLI	HYPOTHETICAL 60.6 KD PROTEIN	ESCHERICHIA COLI	270-297								
PYIEC_ERWCH	HYPOTHETICAL PROTEIN	ERWINIA CHRYSANTHEMI	22-63								
PYIED_ECOLI	HYPOTHETICAL 34.8 KD PROTEIN	ESCHERICHIA COLI	86-120								
PYIEG_ECOLI	HYPOTHETICAL 46.9 KD PROTEIN	ESCHERICHIA COLI	293-327								
PYIEH_ECOLI	HYPOTHETICAL 24.1 KD PROTEIN	ESCHERICHIA COLI	51-78								
PYIEM_ECOLI	HYPOTHETICAL 13.0 KD PROTEIN	ESCHERICHIA COLI	72-105								
PYIEO_ECOLI	HYPOTHETICAL 31.3 KD PROTEIN	ESCHERICHIA COLI	201-242	380-407							
PYIFC_ECOLI	HYPOTHETICAL 39.6 KD PROTEIN	ESCHERICHIA COLI	175-202								
PYIGI_ECOLI	HYPOTHETICAL 14.0 KD PROTEIN	ESCHERICHIA COLI	51-92								
PYIGM_ECOLI	HYPOTHETICAL 33.7 KD PROTEIN	ESCHERICHIA COLI	120-154								
PYIGN_ECOLI	HYPOTHETICAL 34.7 KD PROTEIN	ESCHERICHIA COLI	207-234								
PYIGO_ECOLI	HYPOTHETICAL 28.1 KD PROTEIN	ESCHERICHIA COLI	67-94								
PYIGP_ECOLI	HYPOTHETICAL 22.3 KD PROTEIN	ESCHERICHIA COLI	173-200								
PYIGT_ECOLI	HYPOTHETICAL 27.8 KD PROTEIN	ESCHERICHIA COLI	132-159								
PYIHB_ECOLI	HYPOTHETICAL 21.2 KD PROTEIN	ESCHERICHIA COLI	13-40								
PYIHD_ECOLI	HYPOTHETICAL 10.3 KD PROTEIN	ESCHERICHIA COLI	28-55								
PYIHF_ECOLI	HYPOTHETICAL 34.1 KD PROTEIN	ESCHERICHIA COLI	272-306								
PYIHI_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN	ESCHERICHIA COLI	112-139								
PYIHK_ECOLI	HYPOTHETICAL 65.4 KD PROTEIN	ESCHERICHIA COLI	4-31								
PYIHM_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN	ESCHERICHIA COLI	83-110	120-154	297-324						
PYIHO_ECOLI	HYPOTHETICAL 81.8 KD PROTEIN	ESCHERICHIA COLI	611-646								
PYIHP_ECOLI	HYPOTHETICAL 53.1 KD PROTEIN	ESCHERICHIA COLI	331-364								
PYIIV_ECOLI	HYPOTHETICAL 21.9 KD PROTEIN	ESCHERICHIA COLI	72-99								
PYIHX_ECOLI	HYPOTHETICAL 23.5 KD PROTEIN	ESCHERICHIA COLI	9-36								
PYIHZ_ECOLI	HYPOTHETICAL 13.9 KD PROTEIN	ESCHERICHIA COLI	6-33								
PYIIP_ECOLI	HYPOTHETICAL 32.9 KD PROTEIN	ESCHERICHIA COLI	23-63								
PYIIU_ECOLI	HYPOTHETICAL 9.6 KD PROTEIN	ESCHERICHIA COLI	28-71								
PYIJC_ECOLI	HYPOTHETICAL 26.6 KD PROTEIN	ESCHERICHIA COLI	136-163								
PYIJH_ECOLI	HYPOTHETICAL 78.3 KD PROTEIN	ESCHERICHIA COLI	221-263								
PYIJK_ECOLI	HYPOTHETICAL 11.3 KD PROTEIN	ESCHERICHIA COLI	26-53								
PYIJO_ECOLI	HYPOTHETICAL 32.1 KD PROTEIN	ESCHERICHIA COLI	214-241								
PYIJP_ECOLI	HYPOTHETICAL 66.6 KD PROTEIN	ESCHERICHIA COLI	110-137	419-446							
PYINL_LISMO	HYPOTHETICAL 26.8 KD PROTEIN	LISTERIA MONOCYTOGENES	7-34								
PYIS1_SHISO	INSERTION ELEMENT IS600	SHIGELLA SONNEI	62-89								
PYIS1_STRCO	IS110 HYPOTHETICAL 43.6 KD PROTEIN	STREPTOMYCES COELICOLOR	123-152								
PYIS3_SHISO	INSERTION ELEMENT IS629	SHIGELLA SONNEI	66-100								
PYISP_BACSP	HYPOTHETICAL 42.1 KD PROTEIN	BACILLUS SP	312-339								
PYIAO_ECOLI	HYPOTHETICAL 22.6 KD PROTEIN	ESCHERICHIA COLI	51-78								
PYIAJ_ECOLI	HYPOTHETICAL 20.4 KD PROTEIN	ESCHERICHIA COLI	88-122								
PYIBH_ECOLI	HYPOTHETICAL 78.3 KD PROTEIN	ESCHERICHIA COLI	93-120								
PYIBL_ECOLI	HYPOTHETICAL 9.7 KD PROTEIN	ESCHERICHIA COLI	10-37								
PYIBM_ECOLI	HYPOTHETICAL 26.7 KD PROTEIN	ESCHERICHIA COLI	112-149								
PYIBQ_ECOLI	HYPOTHETICAL 13.7 KD PROTEIN	ESCHERICHIA COLI	2-29								
PYICC_ECOLI	HYPOTHETICAL 60.8 KD PROTEIN	ESCHERICHIA COLI	38-65	414-441	451-492						

BAD ORIGINAL

PCGENE	10/21/94	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYCB_ECOLI	HYPOTHETICAL 60.3 KD PROTEIN	ESCHERICHIA COLI	434-481								
PYCO_ECOLI	HYPOTHETICAL 59.2 KD PROTEIN	ESCHERICHIA COLI	394-421								
PYCO_ECOLI	HYPOTHETICAL 31.1 KD PROTEIN	ESCHERICHIA COLI	91-118								
PYCP_ECOLI	HYPOTHETICAL 53.4 KD PROTEIN	ESCHERICHIA COLI	242-269								
PYCS_ECOLI	HYPOTHETICAL 73.7 KD PROTEIN	ESCHERICHIA COLI	366-396								
PYCW_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	50-84								
PYDA_ECOLI	HYPOTHETICAL 84.2 KD PROTEIN	ESCHERICHIA COLI	2-29	451-483							
PYDB_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	105-134								
PYJA_ECOLI	HYPOTHETICAL 17.5 KD PROTEIN PRECURSOR	ESCHERICHIA COLI	35-69	88-129							
PYKB_BACFI	HYPOTHETICAL 48.8 KD PROTEIN	BACILLUS FIRMUS	321-355								
PYLA1_LACAC	HYPOTHETICAL PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74								
PYLA2_LACAC	HYPOTHETICAL 14.1 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	13-42								
PYLA3_LACAC	HYPOTHETICAL 14.4 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74								
PYLAC_SULSO	HYPOTHETICAL 24.4 KD PROTEIN	SULFOLOBUS SOLFATARICUS	23-50								
PYLP1_PSEPU	HYPOTHETICAL 44.7 KD PROTEIN	PSEUDOMONAS PUTIDA	186-213	314-341							
PYLPA_YEREN	YLPA LIPOPROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	184-211								
PYLT1_ANAVA	HYPOTHETICAL 22.6 KD PROTEIN	ANABAENA VARIABILIS	172-199								
PYLUD_LACLA	HYPOTHETICAL 29.7 KD PROTEIN	LACTOCOCCUS LACTIS	135-70								
PYMK2_BACSU	HYPOTHETICAL 33.3 KD PROTEIN	BACILLUS SUBTILIS	32-79								
PYMG1_MYCGE	HYPOTHETICAL 114.4 KD PROTEIN PRECURSOR	MYCOPLASMA GENITALIUM	56-83	139-193	420-445	981-1008					
PYNGA_CLOPE	HYPOTHETICAL PROTEIN	CLOSTRIDIUM PERFRINGENS	139-166								
PYNGB_CLOPE	HYPOTHETICAL 31.2 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	12-49	63-97	182-211						
PYNII_METTL	HYPOTHETICAL PROTEIN	METHANOCOCCUS THERMOLITHOTROPHICUS	55-89								
PYNQ1_PARDE	HYPOTHETICAL 9.3 KD PROTEIN	PARACOCCUS DENITRIFICANS	32-86								
PYNT3_ANASP	HYPOTHETICAL 28.1 KD PROTEIN	ANABAENA SP	171-198								
PYNT5_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	87-165								
PYOHD_ECOLI	HYPOTHETICAL 31.4 KD PROTEIN	ESCHERICHIA COLI	5-32								
PYOHG_ECOLI	HYPOTHETICAL 41.3 KD PROTEIN	ESCHERICHIA COLI	104-171	289-316							
PYOIA_ECOLI	HYPOTHETICAL 13.9 KD PROTEIN	ESCHERICHIA COLI	17-44								
PYOIE_ECOLI	HYPOTHETICAL 93.5 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYOIF_ECOLI	HYPOTHETICAL 9.5 KD PROTEIN	ESCHERICHIA COLI	41-82								
PYOIH_ECOLI	HYPOTHETICAL 54.3 KD PROTEIN	ESCHERICHIA COLI	145-193								
PYOJ1_ECOLI	HYPOTHETICAL 16.2 KD PROTEIN	ESCHERICHIA COLI	94-121								
PYOM4_PHOSP	HYPOTHETICAL PROTEIN IN OMPH 3'REGION	PHOTOBACTERIUM SP	132-59								
PYOPH_YEREN	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA ENTEROCOLITICA	63-105								
PYOPH_YERPS	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA PSEUDOTUBERCULOSIS	63-105								
PYOPN_YEREN	OUTER MEMBRANE PROTEIN YOPN	YERSINIA ENTEROCOLITICA	233-90	66-93	235-262						
PYOPN_YERPS	OUTER MEMBRANE PROTEIN YOPN	YERSINIA PSEUDOTUBERCULOSIS	233-90	66-93	235-262						
PYOPQ_YEREN	YOPQ PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	61-88								
PYOMA_HAEIN	HYPOTHETICAL 31.3 KD PROTEIN	HAEMOPHILUS INFLUENZAE	147-174								
PYORA_LISMO	HYPOTHETICAL 23.6 KD PROTEIN	LISTERIA MONOCYTOGENES	182-77								
PYORA_PYRWO	HYPOTHETICAL 20.7 KD PROTEIN	PYROCOCCUS WOESEI	183-210								
PYORB_HAEIN	HYPOTHETICAL 19.8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	39-66								
PYORC_HAEIN	HYPOTHETICAL 19.9 KD PROTEIN	HAEMOPHILUS INFLUENZAE	49-79								
PYORE_HAEIN	8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	47-74	82-109							
PYORF_HAEIN	26.8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	199-229								
PYORH_HAEIN	HYPOTHETICAL 13.7 KD PROTEIN	HAEMOPHILUS INFLUENZAE	7-34								
PYORI_HAEIN	93.4 KD PROTEIN	HAEMOPHILUS INFLUENZAE	416-450	688-722							
PYORQ_BACSU	HYPOTHETICAL 34 KD PROTEIN	BACILLUS SUBTILIS	148-175								
PYORX_PYRWO	HYPOTHETICAL PROTEIN	PYROCOCCUS WOESEI	66-93								
PYORZ_LISMO	HYPOTHETICAL 16.9 KD PROTEIN	LISTERIA MONOCYTOGENES	27-54								
PYP15_STAAU	HYPOTHETICAL 13.5 KD PROTEIN	STAPHYLOCOCCUS AUREUS	71-98	110-137							
PYP21_BACSU	HYPOTHETICAL 22.3 KD PROTEIN	BACILLUS SUBTILIS	57-84								
PYP23_STAAU	HYPOTHETICAL 22.2 KD PROTEIN	STAPHYLOCOCCUS AUREUS	29-70								
PYP2A_STAAU	HYPOTHETICAL 26.9 KD PROTEIN	STAPHYLOCOCCUS AUREUS	34-104								
PYP2B_STAAU	HYPOTHETICAL 27.0 KD PROTEIN	STAPHYLOCOCCUS AUREUS	23-60	63-89	179-206						
PYP2C_STAAU	HYPOTHETICAL 27.7 KD PROTEIN	STAPHYLOCOCCUS AUREUS	13-43	119-176							

BAD ORIGINAL

PCGENE	1071217844	Prokaryotic Sequences								
FILENAME	PROTEIN	ORGANISM	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PYPJ_AGRT4	HYPOTHETICAL PROTEIN J	AGROBACTERIUM TUMEFACIENS	39-56							
PYPAJ_LEGPN	HYPOTHETICAL PROTEIN	LEGIONELLA PNEUMOPHILA	94-133							
PYPAS_ENTFA	HYPOTHETICAL 11 KD PROTEIN	ENTEROCOCCUS FAECALIS	79-106							
PYPA_BACAN	HYPOTHETICAL 21.6 KD PROTEIN	BACILLUS ANTHRACIS	13-47	115-162						
PYPC1_ECOLI	HYPOTHETICAL 27.6 KD PROTEIN	ESCHERICHIA COLI	3-32							
PYPDA_BACSU	HYPOTHETICAL 27.3 KD PROTEIN	BACILLUS SUBTILIS	184-212							
PYPFT_ECOLI	HYPOTHETICAL 12.6 KD PROTEIN	ESCHERICHIA COLI	16-43							
PYPH1_SYNP2	HYPOTHETICAL 18.1 KD PROTEIN	SYNECHOCOCCUS SP	34-61							
PYPI6_CLOPE	HYPOTHETICAL 19.7 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	7-34	43-77	83-149					
PYPI9_CLOPE	HYPOTHETICAL 14.5 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	2-19							
PYPIX_CLOPE	HYPOTHETICAL 28.4 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	110-137	263-290	303-340					
PYPIY_PSEAE	HYPOTHETICAL 28.5 KD PROTEIN	PSEUDOMONAS AERUGINOSA	22-53							
PYPP_BACSU	HYPOTHETICAL PROCESSING PROTEASE	BACILLUS SUBTILIS	329-356							
PYPQQ_KLEPN	HYPOTHETICAL PROTEIN	KLEBSIELLA PNEUMONIAE	240-270							
PYPS3_PLEBO	HYPOTHETICAL 13.1 KD PROTEIN	PLECTONEMA BORYANUM	27-54							
PYPV1_METTF	HYPOTHETICAL 40.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	38-85	308-335						
PYPV3_METTF	HYPOTHETICAL 22.5 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	3-30							
PYPV7_METTF	HYPOTHETICAL 17.3 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	69-117							
PYPV8_METTF	HYPOTHETICAL 49.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	333-360	389-430						
PYPY8_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	602-636							
PYPZ1_METTF	HYPOTHETICAL 40.8 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	38-85	308-335						
PYPZ2_METTF	HYPOTHETICAL 33.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	38-65	134-188						
PYPZ5_METTF	HYPOTHETICAL 54.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	193-220	226-253	381-408					
PYPZ7_METTF	HYPOTHETICAL 9.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	5-28							
PYR10_THEPE	HYPOTHETICAL 18.7 KD PROTEIN	THERMOFILUM PENDENS	82-109							
PYRBI_HALCU	HYPOTHETICAL 40 KD GTP-BINDING PROTEIN	HALOBACTERIUM CUTURUBRUM	20-51							
PYREC_SYNP2	HYPOTHETICAL 28.3 KD PROTEIN	SYNECHOCOCCUS SP	49-76							
PYRF6_SALTY	HYPOTHETICAL 40.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	143-190							
PYRJ1_SALTY	HYPOTHETICAL 31.0 KD PROTEIN	SALMONELLA TYPHIMURIUM	428-455							
PYRJ5_SALTY	HYPOTHETICAL 20.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	30-56							
PYRJ6_SALTY	HYPOTHETICAL 36.6 KD PROTEIN	SALMONELLA TYPHIMURIUM	136-157							
PYRJG_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	140-167							
PYRJ1_METVA	HYPOTHETICAL PROTEIN	METHANOCOCCUS VANNIELII	40-93	129-156						
PYRP2_METVA	HYPOTHETICAL 11.6 KD PROTEIN	METHANOCOCCUS VANNIELII	13-40							
PYRP2_SULAC	HYPOTHETICAL 11.3 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	5-51							
PYRP3_SULAC	HYPOTHETICAL 14.5 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	137-71							
PYRTP_BACSU	HYPOTHETICAL 25.3 KD PROTEIN	BACILLUS SUBTILIS	29-56							
PYRT3_BACSU	HYPOTHETICAL 11.4 KD PROTEIN	BACILLUS SUBTILIS	3-30	44-81						
PYSCB_YEREN	HYPOTHETICAL YSC OPERON PROTEIN B	YERSINIA ENTEROCOLITICA	90-121							
PYSCC_YEREN	YSC OPERON PROTEIN C PRECURSOR	YERSINIA ENTEROCOLITICA	38-72	365-399						
PYSCD_YEREN	YSC OPERON PROTEIN D	YERSINIA ENTEROCOLITICA	242-269							
PYSCH_YEREN	YSC OPERON PROTEIN H	YERSINIA PSEUDOTUBERCULOSIS	28-58							
PYSCH_YERPS	YSC OPERON PROTEIN H	YERSINIA ENTEROCOLITICA	28-58							
PYSCI_YEREN	YSC OPERON PROTEIN I	YERSINIA ENTEROCOLITICA	49-76							
PYSCI_YERPS	YSC OPERON PROTEIN I	YERSINIA PSEUDOTUBERCULOSIS	49-76							
PYSCJ_YEREN	YSC OPERON LIPOPROTEIN J PRECURSOR	YERSINIA ENTEROCOLITICA	99-126							
PYSCJ_YERPS	YSC OPERON LIPOPROTEIN J PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	99-126							
PYSCL_YEREN	YSC OPERON PROTEIN L	YERSINIA ENTEROCOLITICA	41-68							
PYSCL_YERPS	YSC OPERON PROTEIN L	YERSINIA PSEUDOTUBERCULOSIS	41-68							
PYSMA_SERMA	HYPOTHETICAL 9.5 KD PROTEIN	SERRATIA MARCESCENS	11-70							
PYSOI_DESDM	HYPOTHETICAL 28.3 KD PROTEIN	DESULFUROLOBUS AMBIVALENS	61-109							
PYSOJ_DESAM	HYPOTHETICAL PROTEIN	DESULFUROLOBUS AMBIVALENS	65-135							
PYSP2_LEPIN	HYPOTHETICAL PROTEIN	LEPTOSPIRA INTERROGANS	6-33	60-94						
PYSR1_MYCMY	HYPOTHETICAL PROTEIN	MYCOPLASMA MYCOIDES	33-99	185-227	300-337					
PYSY3_BACSU	HYPOTHETICAL 19.6 KD PROTEIN	BACILLUS SUBTILIS	72-99							
PYSYN_METFE	HYPOTHETICAL PROTEIN	METHANOTHERMUS FERVIDUS	78-105							
PYT17_STRFR	HYPOTHETICAL 37.1 KD PROTEIN	STREPTOMYCES FRADIAE	246-273							

BAD ORIGINAL

PCGENE	10Jul19x4	Prokaryotic Sequences									
FILE_NAME	PROTEIN	ORGANISM	ARFA1	ARFA1	ARFA3	ARFA4	ARFA5	ARFA6	ARFA7	ARFA1	ARFA2
PYTDK_BACSU	HYPOTHETICAL 35.6 KD PROTEIN	BACILLUS SUBTILIS	244-311	279-304							
PYTLE_LEPBI	HYPOTHETICAL 22 KD PROTEIN	LEPTOSPIRA BIFLEXA	84-111								
PYTIP_LACLA	HYPOTHETICAL 13.3 KD PROTEIN	LACTOCOCCUS LACTIS	76-113								
PYT51_BACSU	HYPOTHETICAL 20 KD PROTEIN	BACILLUS SUBTILIS	37-64								
PYT3F_SPICI	HYPOTHETICAL 23.8 KD PROTEIN	SPIROPLASMA CITRI	102-149								
PYX04_BACSU	HYPOTHETICAL 12.8 KD PROTEIN	BACILLUS SUBTILIS	37-64	68-95							
PYX06_BACSU	HYPOTHETICAL 21.0 KD PROTEIN	BACILLUS SUBTILIS	143-169								
PYX13_BACSU	HYPOTHETICAL 20.0 KD PROTEIN	BACILLUS SUBTILIS	17-51								
PYX15_BACSU	HYPOTHETICAL 61.8 KD PROTEIN	BACILLUS SUBTILIS	165-207	262-289							
PYX18_BACSU	HYPOTHETICAL 66.8 KD PROTEIN	BACILLUS SUBTILIS	3-30	34-61	94-142						
PYX19_BACSU	HYPOTHETICAL 31.3 KD PROTEIN	BACILLUS SUBTILIS	56-83	85-112							
PYX20_BACSU	HYPOTHETICAL 23.3 KD PROTEIN	BACILLUS SUBTILIS	24-58								
PYX12_ANASP	HYPOTHETICAL 18.9 KD PROTEIN	ANABAENA SP	77-104								
PYXYB_CALSA	HYPOTHETICAL 10.7 KD PROTEIN	CALDOCELLUM SACCHAROLYTICUM	9-39								
PYXYC_CALSA	HYPOTHETICAL PROTEIN	CALDOCELLUM SACCHAROLYTICUM	41-94								
PYZE1_ECOLI	HYPOTHETICAL 16.7 KD PROTEIN	ESCHERICHIA COLI	41-78								

TABLE IX

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL HUMAN PROTEINS

PCGENE	107x178x4 Motif Search on All Human Protein Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN									
P141F_HUMAN	14-3-3 PROTEIN BETA (PROTEIN A31) (FRAGMENT).	101-135								
P141S_HUMAN	14-3-3 PROTEIN HOMOLOG STRATIDIN.	45-72								
P141T_HUMAN	14-3-3 PROTEIN THETA (14-3-3 PROTEIN T-CELL) (HS1 PROTEIN).	61-92								
P141Z_HUMAN	14-3-3 PROTEIN ZETA (PROTEIN KINASE C INHIBITOR PROTEIN-1) (KCIP-1).	28-55								
P1A33_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-33(AW-19) A*3301 ALPHA CHAIN	87-114								
P1A34_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-34(AW-19) A*3402 ALPHA CHAIN	87-114								
P1B03_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-7 B*0702 ALPHA CHAIN	87-114	148-182							
P1B05_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-13 B*1301 ALPHA CHAIN	87-114								
P1B10_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-73(B-15) B*1502 ALPHA CHAIN	84-115								
P1B11_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-72(BW-70) B*1503 ALPHA	84-115								
P1B12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-62 B*1504 ALPHA CHAIN	76-107								
P1B13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-18 B*1801 ALPHA CHAIN	84-115								
P1B31_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3501 ALPHA CHAIN	84-115								
P1B32_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3502 ALPHA CHAIN	84-115								
P1B33_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3503 ALPHA CHAIN	84-115								
P1B34_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3504 ALPHA CHAIN	76-107								
P1B35_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3505 ALPHA CHAIN	84-115								
P1B36_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3506 ALPHA CHAIN	84-115								
P1B37_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3507 ALPHA CHAIN	84-115								
P1B38_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3508 ALPHA CHAIN	84-115								
P1B39_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-37 B*3701 ALPHA CHAIN	88-115								
P1B52_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-39 B*3902 ALPHA CHAIN	87-114								
P1B53_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-60(B-60) B*4001 ALPHA CHAIN	60-91								
P1B54_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-60 B*4002 ALPHA CHAIN	84-115								
P1B55_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-60 B*4003 ALPHA CHAIN	84-115								
P1B56_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-60 B*4004 ALPHA CHAIN	84-115								
P1B58_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-41 B*4101 ALPHA CHAIN	84-115								
P1B59_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-42 B*4201 ALPHA CHAIN	87-114								
P1B40_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4401 ALPHA CHAIN	84-111								
P1B41_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4402 ALPHA CHAIN	87-114								
P1B42_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4403 ALPHA CHAIN	87-114								
P1B43_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-45(B-12) B*4501 ALPHA CHAIN	84-115								
P1B44_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-46 B*4601 ALPHA CHAIN	87-114								
P1B45_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-47 B*4701 ALPHA CHAIN	88-115								
P1B46_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-48 B*4801 ALPHA CHAIN	84-115								
P1B47_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-49(B-21) B*4901 ALPHA CHAIN	87-114								
P1B48_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-50(B-21) B*5001 ALPHA CHAIN	84-115								
P1B53_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-52(B-5) B*5201 ALPHA CHAIN	87-114								
P1B55_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-54(BW-22) B*5401 ALPHA	87-114								
P1B56_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-55(BW-22) B*5501 ALPHA	87-114								
P1B57_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-55(BW-22) B*5502 ALPHA	87-114								
P1B58_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56(BW-22) B*5601 ALPHA	87-114								
P1B59_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56(BW-22) B*5602 ALPHA	87-114								
P1C01_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0101 ALPHA CHAIN	87-114								
P1C02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0102 ALPHA CHAIN	87-114								
P1C03_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0201 ALPHA CHAIN	87-114								
P1C04_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-3 CW*0303 ALPHA CHAIN	87-114								
P1C05_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-3 CW*0102 ALPHA CHAIN	87-114								
P1C12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0801 ALPHA CHAIN	87-114								
P1C13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0802 ALPHA CHAIN	87-114								
P1C14_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0803 ALPHA CHAIN	87-114								
P1C17_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW*1401 ALPHA CHAIN PRECURSOR	87-114								
P2A6_HUMAN	69/71 KD (7-S)OLIGOADENYLATE SYNTHETASE	593-630								
P2AA_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, ALPHA ISOFORM	12-49	54-81							
P2AB_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, BETA ISOFORM	9-36	41-68	79-106						
P2BA_HUMAN	PROTEIN PHOSPHATASE PP2A, 55 KD REGULATORY SUBUNIT, ALPHA ISOFORM	177-218								
P411_HUMAN	ERYTHROID PROTEIN 4.1 (BAND 4.1, ERYTHROCYTE FORM)	32-66								

BAD ORIGINAL

PCGENE	1997x17x4 Medl Search on All Human Protein Sequences									
FILENAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
P412_HUMAN	NON-ERYTHROID PROTEIN 4.1 (BAND 4.1, LYMPHOID FORM).	1-30	708-735							
P42_HUMAN	ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2.	173-200	318-345							
P4F2_HUMAN	4F2 CELL-SURFACE ANTIGEN HEAVY CHAIN (4F2HC) (LYMPHOCYTE ACTIVATION	281-322								
P5H1E_HUMAN	5-HYDROXYTRYPTAMINE 1E RECEPTOR (5-HT-1E) (SEROTONIN RECEPTOR).	311-338								
P5H1F_HUMAN	5-HYDROXYTRYPTAMINE 1F RECEPTOR (5-HT-1F) (SEROTONIN RECEPTOR).	222-253								
P5HDA_HUMAN	5-HYDROXYTRYPTAMINE 2A RECEPTOR (5-HT-2A) (SEROTONIN RECEPTOR)	22-56								
P5H7_HUMAN	5-HYDROXYTRYPTAMINE 7 RECEPTOR (5-HT-7) (5-HT-X) (SEROTONIN RECEPTOR)	72-99								
PA1AC_HUMAN	ALPHA-1-ANTICHYMOTRYPSIN PRECURSOR (ACT).	98-132	330-359							
PA1AG_HUMAN	ALPHA-1-ACID GLYCOPROTEIN 1 PRECURSOR (OROSOMUCOID) (ORD).	92-119								
PA1AT_HUMAN	ALPHA-1-ANTITRYPSIN PRECURSOR (ALPHA-1 PROTEASE INHIBITOR) (ALPHA-1-	168-202								
PA1AU_HUMAN	ALPHA-1-ANTITRYPSIN-RELATED PROTEIN PRECURSOR.	163-193								
PA2AP_HUMAN	ALPHA-2-ANTIPLASMIN PRECURSOR (ALPHA-2-PLASMIN INHIBITOR) (ALPHA-2-	191-218	385-393							
PA2GL_HUMAN	LEUCINE-RICH ALPHA-2-GLYCOPROTEIN (LAG).	104-134								
PA2MG_HUMAN	ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA-2-M).	53-80	319-349	1085-1112	1402-1429					
PA4_HUMAN	ALZHEIMER'S DISEASE AMYLOID A4 PROTEIN PRECURSOR (PROTEASE NEXIN-II)	418-455								
PAACT_HUMAN	ALPHA-ACTININ (F-ACTIN CROSS LINKING PROTEIN).	92-119	720-747							
PAATM_HUMAN	ASPARTATE AMINOTRANSFERASE, MITOCHONDRIAL PRECURSOR (EC 2.6.1.1)	109-136								
PABP2_HUMAN	ENDOTHELIAL ACTIN-BINDING PROTEIN (ABP-280) (NONMUSCLE FILAMIN)	61-88	119-147	2604-2633						
PAC13_HUMAN	ACTIVATOR 1 37 KD SUBUNIT (REPLICATION FACTOR C 37 KD SUBUNIT) (A1	306-333								
PAC1L_HUMAN	ACTIVATOR 1 140 KD SUBUNIT (REPLICATION FACTOR C LARGE SUBUNIT) (A1	14-51	182-209	668-700						
PACOL_HUMAN	ACYL-COA DEHYDROGENASE PRECURSOR, LONG-CHAIN SPECIFIC (EC 1.3.99.13)	78-108	179-206	313-340						
PACET_HUMAN	ANGIOTENSIN-CONVERTING ENZYME PRECURSOR, TESTIS-SPECIFIC (EC 3.4.15.1)	78-115	126-153	676-710						
PACE_HUMAN	ANGIOTENSIN-CONVERTING ENZYME PRECURSOR, SOMATIC (EC 3.4.15.1) (ACE)	632-689	700-727	1230-1284						
PACHA_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, ALPHA CHAIN PRECURSOR	44-80								
PACHE_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, EPSILON CHAIN PRECURSOR	46-98								
PACHG_HUMAN	ACETYLCHOLINE RECEPTOR PROTEIN, GAMMA CHAIN PRECURSOR	41-79	304-331							
PACHO_HUMAN	NEURONAL ACETYLCHOLINE RECEPTOR PROTEIN, BETA-4 CHAIN (FRAGMENT)	29-56	70-97							
PACRO_HUMAN	ACROSIN PRECURSOR (EC 3.4.21.10).	122-149								
PACYM_HUMA	ACYLPHOSPHATASE, MUSCLE TYPE ISOZYME (EC 3.6.1.7) (ACYLPHOSPHATE	26-53								
PADT2_HUMAN	ADP,ATP CARRIER PROTEIN, FIBROBLAST ISOFORM (ADP/ATP TRANSLOCASE 2)	162-189								
PADT3_HUMAN	ADP,ATP CARRIER PROTEIN, LIVER ISOFORM T3 (ADP/ATP TRANSLOCASE 3)	163-190								
PAK19_HUMAN	A-KINASE ANCHOR PROTEIN 79 (AKAP 79) (CAMP-DEPENDENT PROTEIN KINASE	197-238	381-414							
PALFA_HUMAN	FRUCTOSE-BISPHOSPHATE ALDOLASE (EC 4.1.2.13) A (MUSCLE).	36-63								
PALFB_HUMAN	FRUCTOSE-BISPHOSPHATE ALDOLASE (EC 4.1.2.13) B (LIVER).	79-113								
PAMD1_HUMAN	AMP DEAMINASE 1 (EC 3.5.4.6) (MYOADENYLATE DEAMINASE) (AMP DEAMINASE	59-86								
PAMD3_HUMAN	AMP DEAMINASE 3 (EC 3.5.4.6) (AMP DEAMINASE ISOFORM E)	46-76								
PAMPN_HUMAN	AMINOPEPTIDASE N (EC 3.4.11.2) (MICROSOMAL AMINOPEPTIDASE) (GP150)	492-523	604-648	926-964						
PAMPR_HUMAN	AMPHIREGULIN PRECURSOR (AR).	213-247								
PAMQP_HUMAN	ALPHA-2-MACROGLOBULIN RECEPTOR-ASSOCIATED PROTEIN PRECURSOR	177-216	263-290							
PANFB_HUMAN	BRAIN NATRIURETIC PEPTIDE PRECURSOR	36-63								
PANK1_HUMAN	ANKYRIN R (ANKYRINS 2.1 AND 2.2) (ERYTHROCYTE ANKYRIN).	812-839	1004-1031	1617-1644						
PANKB_HUMAN	ANKYRIN, BRAIN VARIANT 1 (ANKYRIN B) (ANKYRIN, NONERYTHROID)	1544-1571								
PANKC_HUMAN	ANKYRIN, BRAIN VARIANT 2 (ANKYRIN, NONERYTHROID)	1811-1838								
PANPA_HUMAN	ATRIAL NATRIURETIC PEPTIDE RECEPTOR A PRECURSOR (ANP-A) (ANPRA) (GC-A)	533-580	825-852							
PANPB_HUMAN	ATRIAL NATRIURETIC PEPTIDE RECEPTOR B PRECURSOR (ANP-B) (ANPRB) (GC-B)	810-837								
PANTO_HUMAN	ANTITHROMBIN-III PRECURSOR (ATIII).	162-196								
PANX0_HUMAN	ANNEXIN II (LIPOCORTIN II) (CALPACTIN I HEAVY CHAIN) (CHROMOBINDIN 8)	40-67	306-333							
PANX5_HUMAN	ANNEXIN III (LIPOCORTIN III) (PLACENTAL ANTICOAGULANT PROTEIN III)	215-242								
PANX6_HUMAN	ANNEXIN VI (LIPOCORTIN VI) (P68) (P70) (PROTEIN III) (CHROMOBINDIN 20)	60-87	626-653							
PANX7_HUMAN	ANNEXIN, INTESTINE-SPECIFIC (ISA).	37-78	137-164							
PAOFA_HUMAN	AMINE OXIDASE (FLAVIN-CONTAINING) A (EC 1.4.3.4) (MONOAMINE OXIDASE)	18-43	74-104							
PAOFB_HUMAN	AMINE OXIDASE (FLAVIN-CONTAINING) B (EC 1.4.3.4) (MONOAMINE OXIDASE)	68-95								
PAPA1_HUMAN	APOLIPOPROTEIN A-I PRECURSOR (APO-A1).	57-84								
PAPB_HUMAN	APOLIPOPROTEIN B-100 PRECURSOR (APO B-100/APO B-48).	585-619	1073-1100	1153-1180	1324-1384	2024-2113	2132-2159	2181-2215	2246-2271	2360-2389
		2466-2507	2529-2559	2850-2900	3260-3290	3480-3570	3620-3654	4040-4078	4090-4120	4135-4167
		4224-4301	4397-4438	4465-4492	4499-4544					

BAD ORIGINAL

PCGENE	1971211rd Motif Search on All Human Protein Sequences									
LINE NAME	PROTEIN	AREA 1	AREA 1	AREA 2	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PAPC_HUMAN	APOLIPOPROTEIN C-II PRECURSOR (APO-CII).	36-45								
PAPC_HUMAN	ADENOMATOUS POLYPOSIS COLI PROTEIN (APC PROTEIN).	143-172	617-651	834-861	1795-1822	2172-2212	2372-2609			
PAPE_HUMAN	APOLIPOPROTEIN E PRECURSOR (APO-E).	48-81	247-274							
PAPOA_HUMAN	APOLIPOPROTEIN(A) PRECURSOR (EC 3.4.21.-) (APO(A)) (LP(A)).	4448-4473								
PAQP1_HUMAN	AQUAPORIN-CHIP (WATER CHANNEL PROTEIN FOR RED BLOOD CELLS AND KIDNEY	19-33								
PARK1_HUMAN	BETA-ADRENERGIC RECEPTOR KINASE 1 (EC 2.7.1.126) (BETA-ARK-1).	333-353								
PARLY_HUMAN	ARGININOSUCCINATE LYASE (EC 4.3.2.1) (ARGINOSUCCINASE).	69-103								
PARNT_HUMAN	ARYL HYDROCARBON RECEPTOR NUCLEAR TRANSLOCATOR (ARNT PROTEIN) (DIO	223-250								
PARRC_HUMAN	BETA-ARRESTIN 2.	213-242	305-332							
PARS3_HUMAN	ARRESTIN (RETINAL S-ANTIGEN) (48 KD PROTEIN) (S-AG).	299-332								
PART1_HUMAN	ARYLAMINE N-ACETYLTRANSFERASE, MONOMORPHIC (EC 2.3.1.5) (NAT).	7-34								
PART2_HUMAN	ARYLAMINE N-ACETYLTRANSFERASE, POLYMORPHIC (EC 2.3.1.5) (PNAT).	7-34								
PASNS_HUMAN	ASPARAGINE SYNTHETASE (GLUTAMINE-HYDROLYZING) (EC 6.3.5.4) (T-511 CELL	311-338	347-374							
PATCD_HUMAN	CALCIUM-TRANSPORTING ATPASE SARCOPLASMIC RETICULUM TYPE (EC 3.6.1.38).	163-190								
PATCE_HUMAN	CALCIUM-TRANSPORTING ATPASE ENDOPLASMIC RETICULUM TYPE (EC 3.6.1.38).	163-190								
PATF1_HUMAN	TRANSCRIPTION FACTOR ATF-1 (FRAGMENT).	203-230								
PATF3_HUMAN	TRANSCRIPTION FACTOR ATF-3 (FRAGMENT).	155-183								
PATF5_HUMAN	TRANSCRIPTION FACTOR ATF-5 (FRAGMENT).	20-61								
PATF6_HUMAN	TRANSCRIPTION FACTOR ATF-6 (FRAGMENT).	34-68								
PATFA_HUMAN	TRANSCRIPTION FACTOR ATF-A AND ATF-A-DELTA.	351-394								
PATFF_HUMAN	ATP SYNTHASE B CHAIN, MITOCHONDRIAL PRECURSOR (EC 3.6.1.34).	129-163								
PB2J3_HUMAN	NUCLEOLAR PHOSPHOPROTEIN B23 (NUCLEOPHOSMIN) (NUMATRIN).	114-141								
PB2R3_HUMAN	BETA-2-ADRENERGIC RECEPTOR.	293-319	345-372							
PB3A3_HUMAN	ANION EXCHANGE PROTEIN 3 (NON-ERYTHROID BAND 3-LIKE PROTEIN) (BND3L).	1081-1111								
PB94_HUMAN	B94 PROTEIN.	115-142	535-562	609-636						
PBANT_HUMAN	ERYTHROCYTE BAND 7 INTEGRAL MEMBRANE PROTEIN.	106-140								
PBASO_HUMAN	BASONUCLIN.	1226-1247	310-337	773-807						
PBCTB_HUMAN	TRANSFORMING PROTEIN BCL-3-BETA.	178-205								
PBCGF_HUMAN	B-CELL GROWTH FACTOR PRECURSOR (BCGF-1) (BCGF-1) KD).	33-63								
PBCR_HUMAN	BREAKPOINT CLUSTER REGION PROTEIN.	784-825								
PBGLR_HUMAN	BETA-GLUCURONIDASE PRECURSOR (EC 3.2.1.31).	246-280	504-531							
PBMP2_HUMAN	BONE MORPHOGENETIC PROTEIN 2 PRECURSOR (BMP-2) (BMP-2A)	216-250								
PBMP3_HUMAN	BONE MORPHOGENETIC PROTEIN 3 PRECURSOR (BMP-3).	202-229								
PBMP6_HUMAN	BONE MORPHOGENETIC PROTEIN 6 PRECURSOR (BMP-6).	274-301								
PBMP7_HUMAN	BONE MORPHOGENETIC PROTEIN 7 PRECURSOR (BMP-7) (OSTEOGENIC PROTEIN 1)	192-219								
PBN1_HUMAN	BN1 PROTEIN.	284-311								
PBPI_HUMAN	BACTERICIDAL PERMEABILITY INCREASING PROTEIN PRECURSOR (BPI) (CAP 57).	168-195								
PBR5_HUMAN	BOMBESIN RECEPTOR SUBTYPE-3 (BRS-3).	10-37								
PBTF2_HUMAN	BASIC TRANSCRIPTION FACTOR 68 KD SUBUNIT (P68).	128-162	353-385							
PBTO1_HUMAN	BTG1 PROTEIN (B-CELL TRANSLOCATION GENE 1 PROTEIN).	26-53								
PCTTC_HUMAN	C1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC (METHYLENETETRAHYDROFO	330-363								
PCITA_HUMAN	MHC CLASS II TRANSACTIVATOR CIITA.	921-948								
PCA19_HUMAN	COLLAGEN ALPHA 1(XIX) CHAIN PRECURSOR.	1226-1250								
PCA1B_HUMAN	COLLAGEN ALPHA 1(XI) CHAIN PRECURSOR.	341-368								
PCABV_HUMAN	CALBINDIN (VITAMIN D-DEPENDENT CALCIUM-BINDING PROTEIN (CABP), AVIAN-	237-54								
PCAD1_HUMAN	CADHERIN 5 PRECURSOR (7B4 ANTIGEN).	723-750								
PCADE_HUMAN	EPITHELIAL-CADHERIN PRECURSOR (E-CADHERIN) (UVOMORULIN) (CAM 120/80)	838-865								
PCADN_HUMAN	NEURAL-CADHERIN PRECURSOR (N-CADHERIN).	95-122	332-359							
PCADP_HUMAN	PLACENTAL-CADHERIN PRECURSOR (P-CADHERIN).	384-411	580-607							
PCAGA_HUMAN	CALGRANULIN A (MIGRATION INHIBITORY FACTOR-RELATED PROTEIN 8) (MRP-8)	2-29								
PCAIA_HUMAN	CALCITONIN RECEPTOR PRECURSOR (CT-R).	140-167								
PCANA_HUMA	CARTILAGE MATRIX PROTEIN PRECURSOR.	297-324	467-494							
PCAP1_HUMAN	CALPAIN 1, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-ACTIVATED	561-588								
PCAP2_HUMAN	CALPAIN 2, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-ACTIVATED	237-284	502-529							
PCAP3_HUMAN	CALPAIN P94, LARGE (CATALYTIC) SUBUNIT (EC 3.4.22.17) (CALCIUM-	674-701								
PCAPL_HUMAN	PLACENTAL CALCIUM-BINDING PROTEIN.	13-40								
PCAP_HUMAN	ADENYLYL CYCLASE-ASSOCIATED PROTEIN (CAP).	111-138	193-197	321-355						

BAD ORIGINAL

PCGENE	10/1/1/2/3/4 Motif Search on All Human Protein Sequences										
FILENAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PCART_HUMAN	CALRETININ (29 KD CALBINDIN).	217-244									
PCAS8_HUMAN	BETA CASEIN PRECURSOR.	14-48									
PCATA_HUMAN	CATALASE (EC 1.11.1.6).	422-456									
PCATD_HUMAN	CATHEPSIN D PRECURSOR (EC 3.4.23.5).	253-282									
PCATH_HUMAN	CATHEPSIN H PRECURSOR (EC 3.4.22.16).	41-68									
PCATL_HUMAN	CATHEPSIN L PRECURSOR (EC 3.4.22.15) (MAJOR EXCRETED PROTEIN) (MEP).	278-305									
PCAT3_HUMAN	CATHEPSIN S PRECURSOR (EC 3.4.22.27).	30-57	142-169								
PCBFB_HUMAN	CCAAT-BINDING TRANSCRIPTION FACTOR SUBUNIT B (CBF-B) (NF-Y PROTEIN	24-58	138-165								
PCBG_HUMAN	CORTICOSTEROID-BINDING GLOBULIN PRECURSOR (CBG) (TRANSCORTIN).	88-122									
PCBPB_HUMAN	CARBOXYPEPTIDASE B PRECURSOR (EC 3.4.17.2) (PANCREAS-SPECIFIC PROTEIN)	69-129	278-305	319-346							
PCBPH_HUMAN	CARBOXYPEPTIDASE H PRECURSOR (EC 3.4.17.10) (CARBOXYPEPTIDASE E) (CPE)	255-282									
PCC21_HUMAN	CDC21 HOMOLOG (P1-CDC21) (FRAGMENT).	33-63									
PCC27_HUMAN	PROTEIN CDC27HS.	209-240									
PCCG1_HUMAN	TRANSCRIPTION INITIATION FACTOR TFIID 250 KD SUBUNIT (TBP-ASSOCIATED	1298-1342									
PCD14_HUMAN	MONOCYTE DIFFERENTIATION ANTIGEN CD14 PRECURSOR (MYELOID CELL-SPECIF	142-169									
PCD1A_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL	32-63	281-308								
PCD1E_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1E PRECURSOR (CD1E ANTIGEN) (R2G1)	77-104									
PCD20_HUMAN	B-LYMPHOCYTE ANTIGEN CD20 (B-LYMPHOCYTE SURFACE ANTIGEN B1) (LEU-16)	226-253									
PCD2R_HUMAN	CD20 RECEPTOR PRECURSOR.	226-253									
PCD3_HUMAN	T-CELL SURFACE ANTIGEN CD3 PRECURSOR (T-CELL SURFACE ANTIGEN	88-119									
PCD34_HUMAN	HEMOPOIETIC PROGENITOR CELL ANTIGEN CD34 PRECURSOR.	74-108									
PCD37_HUMAN	LEUKOCYTE ANTIGEN CD37.	101-128									
PCD3D_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD3 GAMMA CHAIN PRECURSOR (T-CELL RECEPT	7-34									
PCD3L_HUMAN	CD3D LIGAND (CD3D-L).	96-130	183-217								
PCD4X_HUMAN	CD44 ANTIGEN, EPITHELIAL FORM PRECURSOR (CD44E) (PHAGOCYTIC	328-355									
PCD4_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD4 PRECURSOR (T-CELL SURFACE ANTIGEN	44-71	240-267								
PCD53_HUMAN	LEUKOCYTE SURFACE ANTIGEN CD53.	87-114									
PCD72_HUMAN	B-CELL DIFFERENTIATION ANTIGEN CD72 (LYB-2).	118-177									
PCDK3_HUMAN	CELL DIVISION PROTEIN KINASE 3 (EC 2.7.1.-).	5-32									
PCDK5_HUMAN	CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1.-) (KINASE PSSALRE).	5-32									
PCEBB_HUMAN	CCAAT/ENHANCER BINDING PROTEIN BETA (C/EBP BETA) (NUCLEAR FACTOR	296-330									
PCENB_HUMAN	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B).	568-595									
PCENC_HUMAN	CENTROMERE PROTEIN C (CENP-C) (CENTROMERE AUTOANTIGEN C).	433-460									
PCENE_HUMAN	CENTROMERIC PROTEIN E (CENP-E PROTEIN).	372-399	493-520	553-607	715-752	767-825	850-884	901-947	963-995	1080-1107	
		1122-1149	1179-1239	1259-1277	1340-1367	1440-1481	1486-1536	1646-1680	1684-1724	1808-1846	
		1852-1883	1890-1917	1940-1988	2021-2048	2288-2318	2440-2478	2498-2563			
PCERU_HUMAN	CERULOPLASMIN PRECURSOR (EC 1.16.3.1) (FERROXIDASE).	913-940									
PCETP_HUMAN	CHOLESTERYL ESTER TRANSFER PROTEIN PRECURSOR.	71-108									
PCFTR_HUMAN	CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR (CFTR).	138-189	802-829	893-922	1243-1270						
PCGOC_HUMAN	CGMP-GATED CATION CHANNEL PROTEIN (CYCLIC NUCLEOTIDE	216-243									
PCGL_HUMAN	CYSTATHIONINE GAMMA-LYASE (EC 4.4.1.1).	313-349									
PCHLR_HUMAN	CHLORDECONE REDUCTASE (EC 1.1.1.225) (CDR).	17-51									
PCHOL_HUMAN	CHORIODERAEMIA-LIKE PROTEIN.	56-97	220-257	451-478							
PCHOR_HUMAN	CHORIODERAEMIA PROTEIN (TCD PROTEIN).	113-139									
PCNA_HUMAN	SODIUM CHANNEL PROTEIN, CARDIAC AND SKELETAL MUSCLE ALPHA-SUBUNIT	787-814	943-970								
PCLCA_HUMAN	CLATHRIN LIGHT CHAIN A (BRAIN AND LYMPHOCYTE LCA).	121-148									
PCLCB_HUMAN	CLATHRIN LIGHT CHAIN B (BRAIN AND LYMPHOCYTE LCB).	123-157									
PCLCY_HUMAN	CALCYCLIN (PROLACTIN RECEPTOR ASSOCIATED PROTEIN) (PRA) (GROWTH	9-30									
PCLUS_HUMAN	CLUSTERIN PRECURSOR (COMPLEMENT-ASSOCIATED PROTEIN SP-40,40)	36-98	323-350	367-394							
PCMGA_HUMA	CHROMOGRANIN A PRECURSOR (CGA) (CONTAINS: PANCREASTATIN AND WE-14)	93-120	430-457								
PCNTF_HUMAN	CILIARY NEUROTROPHIC FACTOR (CNTF).	66-93									
PCO07_HUMAN	TUMOR-ASSOCIATED ANTIGEN CO-029.	29-56	95-148								
PCO1_HUMAN	COMPLEMENT C1 PRECURSOR.	242-276	593-620	837-867							
PCO4_HUMAN	COMPLEMENT C4 PRECURSOR.	1282-1319									
PCO5_HUMAN	COMPLEMENT C5 PRECURSOR.	298-342	537-564	970-997	1270-1304						
PCO6_HUMAN	COMPLEMENT C6 PRECURSOR.	367-398									
PCO7_HUMAN	COMPLEMENT C7 PRECURSOR.	225-261									

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FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	AREA 10
PCOX1_HUMAN	CYTOCHROME C OXIDASE POLYPEPTIDE I (EC 1.9.3.1).	333-380									
PCP70_HUMAN	CYTOCHROME P450 VII (CHOLESTEROL 7-ALPHA-MONOOXYGENASE)	263-290	346-373								
PCPCH_HUMAN	CYTOCHROME P450 IIC17 (EC 1.14.14.1) (P450-254C) (FRAGMENT).	109-136									
PCPE1_HUMAN	CYTOCHROME P450 IIE1 (EC 1.14.14.1) (P450-J) (ETHANOL INDUCIBLE).	231-258									
PCPS4_HUMAN	CARBAMOYL-PHOSPHATE SYNTHASE (AMMONIA) MITOCHONDRIAL PRECURSOR	112-146	420-447								
PCPT2_HUMAN	MITOCHONDRIAL CARNITINE PALMITOYLTRANSFERASE II PRECURSOR	410-437									
PCP17_HUMAN	CYTOCHROME P450 XVIIA1 (P450-C17) (EC 1.14.99.9) (STEROID 17-ALPHA-	226-257									
PCPV1_HUMAN	CYTOCHROME P450 XIX A1 (AROMATASE) (EC 1.14.14.1) (ESTROGEN	234-271									
PCR3_HUMAN	COMPLEMENT RECEPTOR TYPE 3 PRECURSOR (CR3) (COMPLEMENT C3D RECEPTOR)	986-1013									
PCRCH_HUMAN	COLORECTAL MUTANT CANCER PROTEIN (MCC PROTEIN).	68-124	379-420	633-678	724-754	763-790					
PCRJB_HUMAN	CAMP RESPONSE ELEMENT BINDING PROTEINS A AND B (CREB-A AND CREB-B)	94-123									
PCRJP_HUMAN	CAMP RESPONSE ELEMENT BINDING PROTEIN CRE-BP1.	380-414									
PCRP_HUMAN	C-REACTIVE PROTEIN PRECURSOR.	60-87	130-157								
PCST_HUMAN	CLEAVAGE SIGNAL-1 PROTEIN (CS-1).	260-333									
PCSF1_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR-1 PRECURSOR (CSF-1) (M-CSF).	143-170									
PCSTS_HUMAN	CLEAVAGE STIMULATION FACTOR, 50 KD SUBUNIT (CSTF 50 KD SUBUNIT) (CF-1	6-33									
PCTNA_HUMAN	ALPHA-CATENIN (CADHERIN-ASSOCIATED PROTEIN)	681-718									
PCTNR_HUMAN	ALPHA-CATENIN RELATED PROTEIN (CATENIN ALPHA-2).	680-717									
PCX26_HUMAN	GAP JUNCTION BETA-3 PROTEIN (CONNEXIN 26) (CX26).	108-139									
PCX32_HUMAN	GAP JUNCTION BETA-1 PROTEIN (CONNEXIN 32) (CX32) (GAP JUNCTION 28 KD	117-144									
PCX37_HUMAN	GAP JUNCTION ALPHA-4 PROTEIN (CONNEXIN 37) (CX37)	88-115									
PCYB5_HUMAN	CYTOCHROME B5.	3-42									
PCYG1_HUMAN	GUANYLATE CYCLASE SOLUBLE, BETA-1 CHAIN (EC 4.6.1.2) (70 KD CHAIN)	86-107	126-153	332-396							
PCYG4_HUMAN	GUANYLATE CYCLASE SOLUBLE, ALPHA-2 CHAIN (EC 4.6.1.2)	108-113									
PCYO1_HUMAN	RETINAL GUANYLYL CYCLASE PRECURSOR (EC 4.6.1.2).	824-851									
PCYO_HUMAN	CYTOKINE RECEPTOR COMMON GAMMA CHAIN PRECURSOR (GAMMA-C)	293-320									
PCYTA_HUMAN	CYSTATIN A (STEFIN A) (CYSTATIN AS).	27-58									
PDBL_HUMAN	PROTO-ONCOGENE DBL PRECURSOR (CONTAINS: MCF2)	233-283	485-524	766-793	801-845						
PDESM_HUMAN	DESMIN.	153-180	272-312								
PDESP_HUMAN	DESMOPLAKIN I AND II (DPI AND DPII) (FRAGMENT).	31-79	113-143	217-244	260-317	382-434	437-467	528-558	563-598	610-674	
		697-734	738-789	1436-1493	1508-1535						
PDHAP_HUMAN	ALDEHYDE DEHYDROGENASE, DIMERIC NADP-PREFERRING (EC 1.2.1.3).	31-58									
PDMD_HUMAN	DYSTROPHIN.	86-116	338-365	484-511	753-780	976-1003	1012-1039	1201-1228	1364-1394	1615-1674	
		1838-1865	2159-2185	2313-2343	2732-2779	2786-2830	2912-2958	3014-3041	3499-3533		
PDNJ_HUMAN	DNAJ PROTEIN HOMOLOG.	45-76									
PDNLI_HUMAN	DNA LIGASE I (EC 6.5.1.1) (POLYDEOXYRIBONUCLEOTIDE SYNTHASE (ATP))	130-157	335-392	732-759							
PDPOA_HUMAN	DNA POLYMERASE ALPHA (EC 2.7.7.7).	25-74	1009-1037	1100-1127							
PDPOD_HUMAN	DNA POLYMERASE DELTA CATALYTIC CHAIN (EC 2.7.7.7).	729-756									
PDPP4_HUMAN	DIPEPTIDYL PEPTIDASE IV (EC 3.4.14.5) (DPP IV) (T-CELL ACTIVATION	29-77	114-148								
PDUN1_HUMAN	DEOXYRIBONUCLEASE I PRECURSOR (EC 3.1.21.1) (DNASE I).	44-71									
PDSC2_HUMAN	DESMOCOLLIN 3/4/6 PRECURSOR (DESMOSOMAL GLYCOPROTEIN II AND III).	80-107	335-398								
PDSG1_HUMAN	DESMOGLEIN I PRECURSOR (DESMOSOMAL GLYCOPROTEIN 1) (DG1).	13-42	271-298	497-531							
PDSG3_HUMAN	DESMOGLEIN 3 PRECURSOR (130 KD PEMPHIGUS VULGARIS ANTIGEN) (PVA).	211-248	325-352								
PDUO_HUMAN	DIVERGENT UPSTREAM PROTEIN (DUP).	384-418									
PEAR1_HUMAN	V-ERBA RELATED PROTEIN EAR-1.	523-550									
PEBI2_HUMAN	EBV-INDUCED G PROTEIN-COUPLED RECEPTOR 2 (EBI2).	44-78									
PEF1B_HUMAN	ELONGATION FACTOR 1-BETA (EF-1-BETA).	105-132									
PEF1D_HUMAN	ELONGATION FACTOR 1-DELTA (EF-1-DELTA).	84-118									
PEGFR_HUMAN	EPIDERMAL GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112).	64-91	440-467								
PEGF_HUMAN	EPIDERMAL GROWTH FACTOR PRECURSOR, KIDNEY (EGF) (UROGASTRONE)	47-74									
PELF1_HUMAN	ETS-RELATED TRANSCRIPTION FACTOR ELF-1.	531-558									
PENDL_HUMAN	ENDOPLASMIN PRECURSOR (94 KD GLUCOSE-REGULATED PROTEIN) (GRP94) (GP96	47-74	246-273								
PENV1_HUMAN	RETROVIRUS-RELATED ENV POLYPROTEIN.	382-420									
PEPC_HUMAN	10 EPSILON CHAIN C REGION.	161-188									
PEPMO_HUMAN	EPIMORPHIN.	33-62	67-94	249-283							
PER72_HUMAN	PROTEIN DISULFIDE ISOMERASE-RELATED PROTEIN PRECURSOR (ER-72).	58-85	142-169	458-485							
PERC1_HUMAN	DNA EXCISION REPAIR PROTEIN ERCC-1.	240-270									

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TCGENE	107:1:71:4 Medl Search on All Human Protein Sequences									
TILENAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PEXC6_HUMAN	EXCISION REPAIR PROTEIN EXCC-6.	160-209	939-993							
PESTR_HUMAN	ESTROGEN RECEPTOR (EA).	451-488								
PET2_HUMAN	ENDOTHELIN-2 PRECURSOR (ET-2).	133-160								
PET3_HUMAN	ENDOTHELIN-3 PRECURSOR (ET-3).	182-209								
PEVZA_HUMAN	EVE1A PROTEIN PRECURSOR.	29-56								
PEZU_HUMAN	EZRIN (P81) (CYTOVILLIN) (VILLIN-2).	119-146	351-392	402-439	512-539					
PFAI_HUMAN	COAGULATION FACTOR V PRECURSOR.	2103-2137								
PFAT_HUMAN	COAGULATION FACTOR VIII PRECURSOR (PROCOAGULANT COMPONENT).	871-908	1007-1034	1194-1230						
PFAX_HUMAN	COAGULATION FACTOR IX PRECURSOR (EC 3.4.21.22) (CHRISTMAS FACTOR).	271-298								
PFAB1_HUMAN	FATTY ACID-BINDING PROTEIN, INTESTINAL.	98-125								
PFASA_HUMAN	APOPTOSIS-MEDIATING SURFACE ANTIGEN FAS PRECURSOR (APO-1 ANTIGEN).	23-50	249-301	306-333						
PFCE3_HUMAN	LOW AFFINITY IMMUNOGLOBULIN EPSILON FC RECEPTOR (LYMPHOCYTE IGE	81-115								
PFCEA_HUMAN	HIGH AFFINITY IMMUNOGLOBULIN EPSILON RECEPTOR ALPHA-SUBUNIT (FCERI)	140-174								
PFGR2_HUMAN	FIBROBLAST GROWTH FACTOR RECEPTOR 2 PRECURSOR (EC 2.7.1.112).	310-337								
PFIBA_HUMAN	FIBRINOGEN ALPHA CHAIN PRECURSOR.	131-165	427-457							
PFIBB_HUMAN	FIBRINOGEN BETA CHAIN PRECURSOR.	149-186								
PFIBG_HUMAN	FIBRINOGEN GAMMA-A CHAIN PRECURSOR.	59-93	125-160							
PFIBH_HUMAN	FIBRINOGEN GAMMA-B CHAIN (FIBRINOGEN GAMMA').	59-93	125-160							
PFINC_HUMAN	FIBRONECTIN PRECURSOR.	2168-2199								
PFLI1_HUMAN	FLI-1 ONCOGENE (ERGB TRANSCRIPTION FACTOR).	172-209								
PFMO1_HUMAN	DIMETHYLANILINE MONOOXYGENASE (N-OXIDE FORMING) 1 (EC 1.14.13.8)	184-218	256-283	301-338						
PFOS1_HUMAN	FBJ-C-FOS PROTO-ONCOGENE PROTEIN.	162-193								
PFRA1_HUMAN	FOS-RELATED ANTIGEN 1.	133-168								
PFRA2_HUMAN	FOS-RELATED ANTIGEN 2.	149-180								
PFRIH_HUMAN	FERRITIN HEAVY CHAIN.	7-34								
PFRIL_HUMAN	FERRITIN LIGHT CHAIN.	3-33								
PFSHR_HUMAN	FOLLICLE STIMULATING HORMONE RECEPTOR PRECURSOR (FSH-R).	364-393								
PFUCO_HUMAN	TISSUE ALPHA-L-FUCOSIDASE PRECURSOR (EC 3.2.1.51) (ALPHA-L-FUCOSIDASE	308-335								
PFUMH_HUMAN	FUMARATE HYDRATASE, MITOCHONDRIAL (EC 4.2.1.2) (FUMARASE).	424-451								
PG053_HUMAN	PUTATIVE LYMPHOCYTE GOLGI SWITCH PROTEIN.	16-43								
PG1PP_HUMAN	PROTEIN KINASE C SUBSTRATE, 80 KD PROTEIN, HEAVY CHAIN (PKCSH)	146-173								
PG6PI_HUMAN	GLUCOSE-6-PHOSPHATE ISOMERASE (GPI) (EC 5.3.1.9) (PHOSPHOGLUCOSE	16-50								
PGT72_HUMAN	MAJOR GASTROINTESTINAL TUMOR-ASSOCIATED PROTEIN GA733-2 PRECURSOR	181-215								
PGAI2_HUMAN	GALACTOKINASE 2 (EC 2.7.1.6).	234-281								
PGAA1_HUMAN	GAMMA-AMINOBUTYRIC ACID RECEPTOR ALPHA-1 SUBUNIT PRECURSOR (GABA(A)	210-237								
PGAA3_HUMAN	GAMMA-AMINOBUTYRIC ACID RECEPTOR ALPHA-3 SUBUNIT PRECURSOR (GABA(A)	211-235								
PGASR_HUMAN	GASTRIN/CHOLECYSTOKININ TYPE B RECEPTOR (CCK-B RECEPTOR).	35-105								
PGB01_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 1.	22-49								
PGB02_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 2.	22-49								
PGBAK_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(K), ALPHA SUBUNIT (G(I) ALPHA-3).	22-49								
PGBAS_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(S), ALPHA SUBUNIT (ADENYLATE	7-34								
PGBAY_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(Y), ALPHA SUBUNIT (ALPHA-11)	95-122								
PGBB3_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(I)/G(S)/G(T) BETA SUBUNIT 3	63-90								
PGBLP_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN BETA SUBUNIT-LIKE PROTEIN 12.3.	110-137	235-282	289-316						
PGBP2_HUMAN	INTERFERON-INDUCED GUANYLATE-BINDING PROTEIN 2 (GUANINE NUCLEOTIDE-	434-488								
PGBT2_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(T), ALPHA-2 SUBUNIT (TRANSDUCIN	22-49								
PGCF_HUMAN	GC-RICH SEQUENCE DNA-BINDING FACTOR (GCF) (TRANSCRIPTION FACTOR 9)	200-227	293-320	367-394	396-423	647-674				
PGCH1_HUMAN	GTP CYCLOHYDROLASE I (EC 3.5.4.16).	165-192								
PGCRA_HUMAN	GLUCOCORTICOID RECEPTOR, ALPHA (GR).	167-194								
PGCRB_HUMAN	GLUCOCORTICOID RECEPTOR, BETA (GR).	167-194								
PGCSF_HUMAN	GLYCINE DEHYDROGENASE (DECARBOXYLATING) PRECURSOR (EC 1.4.4.2)	460-487								
PGDN_HUMAN	GLIA DERIVED NEXIN (GDN) (PROTEASE NEXIN 1).	83-110								
PGEL5_HUMAN	GELSOLIN PRECURSOR, PLASMA (ACTIN-DEPOLYMERIZING FACTOR) (ADF)	701-728								
PGFAP_HUMAN	GLIAL FIBRILLARY ACIDIC PROTEIN, ASTROCYTE.	189-216	349-376	384-411						
PGLA5_HUMAN	N-ACETYLGLUCOSAMINE-6-SULFATASE PRECURSOR (EC 3.1.6.14) (G6S)	176-221								
PGLPK_HUMAN	GLYCEROL KINASE (EC 2.7.1.30) (ATP:GLYCEROL 3-PHOSPHOTRANSFERASE)	78-112	231-278							
PGLY1_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, CYTOSOLIC (EC 2.1.2.1) (SERINE	32-59	344-371							

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PCGENE	107117Bad Motif Search on All Human Protein Sequence	AREA 1	AREA 1	AREA 1	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN									
POLY2_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, MITOCHONDRIAL (EC 2.1.2.1) (SERINE	417-444								
PGR78_HUMAN	78 KD GLUCOSE REGULATED PROTEIN PRECURSOR (GRP 78) (IMMUNOGLOBULIN	564-591	598-625							
PGA3_HUMAN	GLYCINE RECEPTOR ALPHA-3 CHAIN PRECURSOR.	142-169	341-368							
PGRAV_HUMAN	GRAVIN (FRAGMENT).	9-45	61-88							
PGR2_HUMAN	GROWTH HORMONE-RELEASING HORMONE RECEPTOR PRECURSOR (GHRH RECEPT	128-155								
PGTB2_HUMAN	GLUTATHIONE S-TRANSFERASE HA SUBUNIT 2 (EC 2.5.1.18) (GTHB2) (CLASS-	64-91								
PGTPA_HUMAN	GTPASE-ACTIVATING PROTEIN (GAP) (RAS P21 PROTEIN ACTIVATOR).	474-501	1012-1047							
PGTR1_HUMAN	GLUCOSE TRANSPORTER TYPE 1, ERYTHROCYTE/BRAIN.	274-301								
PGTR3_HUMAN	GLUCOSE TRANSPORTER TYPE 3, BRAIN.	272-299								
PGTR4_HUMAN	GLUCOSE TRANSPORTER TYPE 4, INSULIN-RESPONSIVE.	290-317								
PH10_HUMAN	HISTONE H1°.	44-89								
PH1A_HUMAN	HISTONE H1A (H1.1).	73-104								
PH1B_HUMAN	HISTONE H1B (H1.5).	70-101								
PH1C_HUMAN	HISTONE H1C (H1.2).	71-102								
PH1D_HUMAN	HISTONE H1D (H1.3).	70-101								
PH1T_HUMAN	HISTONE H1T.	74-105								
PH2B0_HUMAN	HISTONE H2B.1.	20-47								
PH2B1_HUMAN	HISTONE H2B.2.	20-47								
PH2B_HUMAN	HISTONE H2B (H2B.1 A).	20-47								
PHA2_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DQ(3) ALPHA CHAIN PRECURSOR.	142-169								
PHB1K_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DR-W53 BETA CHAIN PRECURSOR.	56-83								
PHB1P_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DR(W4) BETA CHAIN PRECURSOR.	30-77								
PHB1Q_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DR(W2) BETA CHAIN PRECURSOR.	30-77								
PHB2S_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, SB BETA CHAIN (FRAGMENT).	16-43								
PHB01_HUMAN	HEPARIN-BINDING GROWTH FACTOR PRECURSOR 1 (HBGF-1) (ACIDIC FIBROBLAST	102-129								
PHB03_HUMAN	INT-2 PROTO-ONCOGENE PROTEIN PRECURSOR (HBGF-3).	61-91								
PHB04_HUMAN	FIBROBLAST GROWTH FACTOR-4 PRECURSOR (FGF-4) (HBGF-4) (HST-2).	41-75	159-186							
PHB1_HUMAN	P59 PROTEIN (HSP BINDING IMMUNOPHILIN) (HBI) (POSSIBLE PEPTIDYL-PROLYL	264-312								
PHEM4_HUMAN	UROPORPHYRINOGEN-III SYNTHASE (EC 4.2.1.75) (UROPORPHYRINOGEN-III	74-118								
PHEP2_HUMAN	HEPARIN COFACTOR II PRECURSOR (HC-II) (PROTEASE INHIBITOR LEUSERPIN 2)	169-196								
PHEP5_HUMAN	SERINE PROTEASE HEPSIN (EC 3.4.21.-).	23-49								
PHEX4_HUMAN	BETA-HEXOSAMINIDASE ALPHA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL	336-383								
PHEXB_HUMAN	BETA-HEXOSAMINIDASE BETA CHAIN PRECURSOR (EC 3.2.1.52) (N-ACETYL-BETA-	388-415								
PHMX1_HUMAN	HOMEOBOX PROTEIN MSX-1 (HOX-7).	178-212								
PHNF1_HUMAN	HEPATOCYTE NUCLEAR FACTOR 1-ALPHA (HNF-1A) (LIVER SPECIFIC	2-29								
PHO1_HUMAN	HEME OXYGENASE 1 (EC 1.14.99.3) (HO-1).	197-224								
PHPPD_HUMAN	4-HYDROXYPHENYLPYRUVATE DIOXYGENASE (EC 1.13.11.27) (4HPPD).	308-333								
PHRX_HUMAN	ZINC FINGER PROTEIN HRX.	321-348	914-974	1637-1666	2215-2286	2289-2316	3117-3344	3448-3475		
PHS1_HUMAN	HEMATOPOIETIC LINEAGE CELL SPECIFIC PROTEIN.	43-70								
PHS9A_HUMAN	HEAT SHOCK PROTEIN HSP 90-ALPHA (HSP 86).	443-470	640-674							
PHSIR_HUMAN	HEAT-STABLE ENTEROTOXIN RECEPTOR PRECURSOR (GC-C) (INTESTINAL	511-545								
PHSF1_HUMAN	HEAT SHOCK FACTOR PROTEIN 1 (HSF 1) (HEAT SHOCK TRANSCRIPTION FACTOR	113-140	168-209							
PHSF2_HUMAN	HEAT SHOCK FACTOR PROTEIN 2 (HSF 2) (HEAT SHOCK TRANSCRIPTION FACTOR	117-198								
PHV2L_HUMAN	IG HEAVY CHAIN PRECURSOR V-II REGION (ARH-77).	67-101								
PHV3T_HUMAN	IG HEAVY CHAIN V-III REGION (GAL).	47-74								
PHOX11_HUMAN	HOMEOBOX PROTEIN HOX-11 (TCL-3 PROTO-ONCOGENE).	262-289								
PHOB7_HUMAN	HOMEOBOX PROTEIN HOX-B7 (HOX-2Q) (HHO.C1).	135-162								
PIAPP_HUMAN	ISLET AMYLOID POLYPEPTIDE	33-80								
PIBP3_HUMAN	INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 3 PRECURSOR (IGFBP-3)	183-210								
PIC1_HUMAN	PLASMA PROTEASE C1 INHIBITOR PRECURSOR (C1 INH).	231-278								
PICA2_HUMAN	INTERCELLULAR ADHESION MOLECULE-2 PRECURSOR (ICAM-2).	57-84								
PIDE_HUMAN	INSULIN-DEGRADING ENZYME (EC 3.4.99.45) (INSULINASE) (INSULIN	474-504	907-941							
PIF41_HUMAN	EUKARYOTIC INITIATION FACTOR 4A-I (EIF-4A-I).	322-349								
PIF4B_HUMAN	INTRINSIC FACTOR PRECURSOR (IF) (GASTRIC INTRINSIC FACTOR).	149-176	406-433							
PIRBA_HUMAN	INHIBIN BETA A CHAIN PRECURSOR (ACTIVIN BETA-A CHAIN) (ERYTHROID	308-349								
PIL1A_HUMAN	INTERLEUKIN-1 ALPHA PRECURSOR (IL-1 ALPHA) (HEMATOPOIETIN-1).	86-107	183-210							
PIL1R_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80).	156-110	172-199							

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PCGENE	107x173x1 Motif Search on All Human Protein Sequences									
FILENAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PIL1R_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80).	437-467								
PIL1T_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE II PRECURSOR (IL-1R2).	139-186								
PIL3R_HUMAN	INTERLEUKIN-3 RECEPTOR ALPHA CHAIN PRECURSOR (IL-3R-ALPHA).	87-114								
PIL6_HUMAN	INTERLEUKIN-6 PRECURSOR (IL-6) (B-CELL STIMULATORY FACTOR 2) (BSF-2)	112-139								
PINAI_HUMAN	INTERFERON ALPHA-I PRECURSOR.	94-121								
PINAR_HUMAN	INTERFERON-ALPHA RECEPTOR PRECURSOR (IFN-ALPHA-REC).	90-117	164-191	300-327	308-335					
PINB_HUMAN	INTERFERON BETA PRECURSOR (FIBROBLAST).	88-129								
PINI1_HUMAN	INTERFERON-INDUCED 17 KD PROTEIN (CONTAINS: INTERFERON-INDUCED 15 KD	83-121								
PINI6_HUMAN	INTERFERON-INDUCED 56 KD PROTEIN (IFI-56K).	51-78	216-245	393-430						
PINSR_HUMAN	INSULIN RECEPTOR PRECURSOR (EC 2.7.1.112) (IR).	592-619								
PINVO_HUMAN	INVOLUCRIN.	119-146	229-273	326-363	386-450					
PIP3K_HUMAN	1D-MYO-INOSITOL-TRISPHOSPHATE 3-KINASE A (EC 2.7.1.127) (INOSITOL	121-162								
PIP3P_HUMAN	PLASMA SERINE PROTEASE (PROTEIN C) INHIBITOR PRECURSOR (PCI).	90-117	206-233							
PIRBP_HUMAN	INTERPHOTORECEPTOR RETINOID-BINDING PROTEIN PRECURSOR (IRBP).	670-697								
PIRF3_HUMAN	INTERFERON REGULATORY FACTOR 3 (IRF-3).	137-193								
PIT3P_HUMAN	75 KD INOSITOL-1,4,5-TRISPHOSPHATE 3-PHOSPHATASE PRECURSOR	235-262								
PITA2_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IA PRECURSOR (GPIA) (COLLAGEN RECEPTO	379-406	900-927							
PITA3_HUMAN	FIBRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-F)	210-284	657-695	765-792						
PITA6_HUMAN	INTEGRIN ALPHA-6 PRECURSOR (VLA-6) (INTEGRIN ALPHA-E) (CD49F).	884-911	944-974							
PITAL_HUMAN	LEUKOCYTE ADHESION GLYCOPROTEIN LFA-1 ALPHA CHAIN PRECURSOR (LEUKOC	236-283	310-341	795-822						
PITAM_HUMAN	CELL SURFACE GLYCOPROTEIN MAC-1 ALPHA SUBUNIT PRECURSOR (CR-3 ALPHA	1044-1078								
PITAV_HUMAN	VITRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-V)	210-264								
PITB1_HUMAN	FIBRONECTIN RECEPTOR, BETA SUBUNIT PRECURSOR (INTEGRIN BETA-1) (CD29)	218-245	354-399							
PITB3_HUMAN	CELL SURFACE ADHESION GLYCOPROTEINS LFA-1, CR3 AND P150,95, BETA-	339-366	705-732							
PITB3_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IIIA PRECURSOR (GPIIIA) (INTEGRIN BETA-	324-351								
PITB4_HUMAN	INTEGRIN BETA-4 SUBUNIT PRECURSOR (GP150).	342-369								
PITB5_HUMAN	INTEGRIN BETA-5 SUBUNIT PRECURSOR.	724-751								
PITB6_HUMAN	INTEGRIN BETA-6 SUBUNIT PRECURSOR.	311-338	352-393							
PITB8_HUMAN	INTEGRIN BETA-8 SUBUNIT PRECURSOR.	362-399	696-737							
PITI2_HUMAN	INTER-ALPHA-TRYPSIN INHIBITOR COMPLEX COMPONENT II PRECURSOR.	134-161	423-452	772-818						
PK1C1_HUMAN	KERATIN, TYPE I CYTOSKELETAL 10 (CYTOKERATIN 10) (K10).	134-187	196-227	337-399	428-462					
PK1CM_HUMAN	KERATIN, TYPE I CYTOSKELETAL 13 (CYTOKERATIN 13) (K13).	113-142								
PK1CN_HUMAN	KERATIN, TYPE I CYTOSKELETAL 14 (CYTOKERATIN 14) (K14).	122-152	306-333	393-424						
PK1CO_HUMAN	KERATIN, TYPE I CYTOSKELETAL 15 (CYTOKERATIN 15) (K15).	113-143								
PK1CP_HUMAN	KERATIN, TYPE I CYTOSKELETAL 16 (CYTOKERATIN 16) (K16).	308-339								
PK1CQ_HUMAN	KERATIN, TYPE I CYTOSKELETAL 17 (CYTOKERATIN 17) (K17).	122-152	302-346	393-431						
PK1CR_HUMAN	KERATIN, TYPE I CYTOSKELETAL 18 (CYTOKERATIN 18) (K18).	87-114	251-298	337-385						
PK1CS_HUMAN	KERATIN, TYPE I CYTOSKELETAL 19 (CYTOKERATIN 19) (K19).	88-118	317-363	370-397						
PK2C1_HUMAN	KERATIN, TYPE I CYTOSKELETAL 1 (CYTOKERATIN 1) (K1) (CYTOSKELETAL 67	196-226	346-384	390-467						
PK2C2_HUMAN	KERATIN, TYPE II CYTOSKELETAL 65 KD.	213-248	364-405	461-488						
PK2C4_HUMAN	KERATIN, TYPE II CYTOSKELETAL 4 (CYTOKERATIN 4) (K4) (FRAGMENT)	42-73	126-153	189-248						
PK2C5_HUMAN	KERATIN, TYPE II CYTOSKELETAL 5 (CYTOKERATIN 5) (K5) (58 KD	185-246	332-373							
PK2C6_HUMAN	KERATIN, TYPE II CYTOSKELETAL 6 (CYTOKERATIN 6) (K6B KERATIN)	178-219	325-366	422-449						
PK2C8_HUMAN	KERATIN, TYPE II CYTOSKELETAL 8 (CYTOKERATIN 8) (K8).	140-167								
PK2CA_HUMAN	KERATIN, TYPE II CYTOSKELETAL 56 KD (K6A KERATIN) (FRAGMENT).	7-34	126-161	217-244						
PK6PF_HUMAN	6-PHOSPHOFRUCTOKINASE, MUSCLE TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	140-167								
PK6PL_HUMAN	6-PHOSPHOFRUCTOKINASE, LIVER TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	49-80	128-159							
PKABL_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE ABL (EC 2.7.1.112) (P150)	498-525								
PKAC_HUMAN	10 KAPPA CHAIN C REGION.	37-85								
PKALM_HUMAN	KALLMANN SYNDROME PROTEIN PRECURSOR (ADHESION MOLECULE-LIKE X-LINK	380-414								
PKAP0_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE I-ALPHA REGULATORY CHAIN	179-206								
PKAP1_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE I-BETA REGULATORY CHAIN	177-204								
PKAP2_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE II-ALPHA REGULATORY CHAIN	175-202	290-317							
PKBF1_HUMAN	NUCLEAR FACTOR KAPPA-B SUBUNIT-1 (NF-KAPPA-B P105 SUBUNIT)	529-570								
PKCRB_HUMAN	CREATINE KINASE, B CHAIN (EC 2.7.3.2).	301-328								
PKECK_HUMAN	TYROSINE PROTEIN-KINASE ECK PRECURSOR (EC 2.7.1.112) (EPITHELIAL CELL	466-493								
PKFEB_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FER (EC 2.7.1.112) (P94-FER)	219-246	564-591							

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PCGENE	10711703.4 Motif Search on All Human Protein Sequences									
ENTRY NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PKFES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FES/FPS (EC 2.7.1.112) (C-FES).	101-143	291-332							
PKFLT_HUMAN	RECEPTOR-RELATED TYROSINE KINASE FLT PRECURSOR (EC 2.7.1.112).	208-255	319-353							
PKFMS_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR 1 RECEPTOR PRECURSOR (CSF-1-R)	292-330								
PKFYN_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FYN (EC 2.7.1.112) (P59-FYN)	199-233								
PKGPB_HUMAN	CGMP-DEPENDENT PROTEIN KINASE, BETA ISOZYME (CGK) (EC 2.7.1.37).	17-54								
PKHEK_HUMAN	TYROSINE KINASE HEK RECEPTOR PRECURSOR (EC 2.7.1.112).	646-673								
PKHN1_HUMAN	KINESIN HEAVY CHAIN.	125-155	425-452	471-542	633-680	689-716	872-899			
PKIT_HUMAN	KIT PROTO-ONCOGENE TYROSINE KINASE PRECURSOR (EC 2.7.1.112).	233-263								
PKMET_HUMAN	HEPATOCYTE GROWTH FACTOR RECEPTOR PRECURSOR (MET PROTO-ONCOGENE	898-925								
PKNA_HUMAN	KINOGEN, HMW PRECURSOR (ALPHA-2-THIOL PROTEINASE INHIBITOR)	505-532								
PKPI0_HUMAN	GALACTOSYLTRANSFERASE ASSOCIATED PROTEIN KINASE P38/ITA (EC 2.7.1.-).	81-108								
PKPA6_HUMAN	INTERFERON-INDUCED, DOUBLE-STRANDED RNA-ACTIVATED PROTEIN KINASE	149-179	191-225	285-312						
PKPTA_HUMAN	PUTATIVE SERINE/THREONINE-PROTEIN KINASE PTA (EC 2.7.1.-).	582-609								
PKPCL_HUMAN	PROTEIN KINASE C, ETA TYPE (EC 2.7.1.-) (NPKC-ETA) (PKC-L).	318-345								
PKPTI_HUMAN	SERINE/THREONINE-PROTEIN KINASE PCTAIRE-1 (EC 2.7.1.-).	149-176	209-233							
PKPY1_HUMAN	PYRUVATE KINASE, M1 (MUSCLE) ISOZYME (EC 2.7.1.40) (CYTOSOLIC THYROID	243-289								
PKPY2_HUMAN	PYRUVATE KINASE, M2 ISOZYME (EC 2.7.1.40).	243-289								
PKPYR_HUMAN	PYRUVATE KINASE, ISOZYME R (EC 2.7.1.40).	2-29								
PKRET_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE RET (EC 2.7.1.112)	183-217								
PKROS_HUMAN	ROS PROTO-ONCOGENE TYROSINE KINASE (EC 2.7.1.112) (FRAGMENT).	157-203								
PKSRC_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE SRC (EC 2.7.1.112) (P60-SRC).	143-170								
PKU7_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P70 (70 KD SUBUNIT OF KU ANTIGEN).	233-279								
PKU8_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P86 (86 KD SUBUNIT OF KU ANTIGEN).	258-292								
PKYES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE YES (EC 2.7.1.112) (P61-YES)	209-243								
PLAM1_HUMAN	LAMIN B1.	32-66	117-144	152-193	214-241	397-424	486-507	516-559		
PLAMA_HUMAN	LAMIN A (70 KD LAMIN).	32-81	114-165	292-343						
PLAMC_HUMAN	LAMIN C.	32-81	114-165	292-343						
PLAR_HUMAN	LAR PROTEIN PRECURSOR (LEUKOCYTE ANTIGEN RELATED) (EC 3.1.3.48).	935-969								
PLA_HUMAN	LUPUS LA PROTEIN (SJOGREN SYNDROME TYPE B ANTIGEN (SS-B)).	191-222	293-342							
PLCAT_HUMAN	PHOSPHATIDYLCHOLINE-STEROL ACYLTRANSFERASE PRECURSOR (EC 2.3.1.43)	131-158								
PLDHH_HUMAN	L-LACTATE DEHYDROGENASE H CHAIN (EC 1.1.1.27) (LDH-H).	81-108	302-329							
PLDHM_HUMAN	L-LACTATE DEHYDROGENASE M CHAIN (EC 1.1.1.27) (LDH-A).	235-252								
PLDLR_HUMAN	LOW-DENSITY LIPOPROTEIN RECEPTOR PRECURSOR.	483-510								
PLEC1_HUMAN	ASIALOGLYCOPROTEIN RECEPTOR 1 (HEPATIC LECTIN H1) (ASGPR).	62-96								
PLEK0_HUMAN	P-SELECTIN PRECURSOR (GRANULE MEMBRANE PROTEIN 140) (GMP-140) (PADGEM)	32-59	87-116							
PLGOL_HUMAN	LACTOYLGLUTATHIONE LYASE (EC 4.4.1.5) (METHYLGLYOXALASE)	83-117								
PLIF_HUMAN	LEUKAEMIA INHIBITORY FACTOR PRECURSOR (LIF) (DIFFERENTIATION-	95-122								
PLIN1_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG.	152-179	232-263	298-338	671-698	874-901	1036-1066			
PLIP0_HUMAN	TRIACYLGLYCEROL LIPASE PRECURSOR (EC 3.1.1.3) (LIPASE, GASTRIC).	156-185								
PLIP1_HUMAN	HORMONE SENSITIVE LIPASE (EC 3.1.1.-) (HSL).	305-332								
PLKHA_HUMAN	LEUKOTRIENE A-4 HYDROLASE (EC 3.3.2.6) (LTA-4 HYDROLASE) (LEUKOTRIENE	42-83	290-324							
PLMA_HUMAN	LAMININ A CHAIN PRECURSOR.	1314-1345	1741-1771	1785-1812	1824-1851	1884-1921	1965-1999	2026-2059	2091-2118	
PLMB1_HUMAN	LAMININ B1 CHAIN PRECURSOR.	1267-1314	1364-1394	1397-1431	1651-1714	1722-1781				
PLMB2_HUMAN	LAMININ B2 CHAIN PRECURSOR.	1100-1135	1313-1343							
PLMG1_HUMAN	LYSOSOME-ASSOCIATED MEMBRANE GLYCOPROTEIN 2 PRECURSOR (LAMP-2).	135-182								
PLOX2_HUMAN	ARACHIDONATE 12-LIPOXYGENASE (EC 1.13.11.31) (12-LOX).	341-368								
PLOX5_HUMAN	ARACHIDONATE 5-LIPOXYGENASE (EC 1.13.11.34) (5-LIPOXYGENASE) (5-LO).	50-87								
PLPH_HUMAN	LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.62)	776-803								
PLRB_HUMAN	PROTEIN-TYROSINE PHOSPHATASE BETA PRECURSOR (EC 3.1.3.48) (PTP-BETA).	140-167	389-417							
PLRO_HUMAN	PROTEIN-TYROSINE PHOSPHATASE GAMMA PRECURSOR (EC 3.1.3.48)	1061-1108								
PLRZ_HUMAN	PROTEIN-TYROSINE PHOSPHATASE ZETA PRECURSOR (EC 3.1.3.48) (PTP-ZETA).	553-587	1024-1051	1933-2000						
PLSHR_HUMAN	LUTROPIN-CHORIOGONADOTROPIC HORMONE RECEPTOR PRECURSOR (LH/CG-R)	66-114	448-480							
PLV7B_HUMAN	IG LAMBDA CHAIN V-III REGION (NEI).	61-88								
PLYAC_HUMAN	LYSOSOMAL ALPHA-GLUCOSIDASE PRECURSOR (EC 3.2.1.20) (ACID MALTASE).	885-912								
PMCOM_HUMAN	MITOCHONDRIAL 2-OXOGLUTARATE/MALATE CARRIER PROTEIN (OGCP).	50-77								
PMGC1_HUMAN	GALACTOSE-SPECIFIC LECTIN (MAC-2 ANTIGEN) (CBP-BINDING PROTEIN) (35 KD	219-246								
PMAN9_HUMAN	MAN(9)-ALPHA-MANNOSIDASE (EC 3.2.1.-).	414-441								

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PCGENE	1:87:173:1 Motif Search on All Human Protein Sequences										
FILENAME	PROTEIN	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 1	AREA 2	AREA 2
PMANA_HUMA	MANNOSE-6-PHOSPHATE ISOMERASE (EC 5.3.1.8) (PHOSPHOMANNOSE ISOMERASE)	60-87									
PMANR_HUMA	MACROPHAGE MANNOSE RECEPTOR PRECURSOR.	240-284	1147-1182								
PMAP2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 2 (FRAGMENT).	434-478									
PMAP4_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 4.	408-449									
PMAX_HUMAN	MAX PROTEIN.	117-144									
PMD4G_HUMA	MD4G PROTEIN (P53-ASSOCIATED PROTEIN).	233-288									
PMDR1_HUMAN	MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1).	381-393									
PMERL_HUMAN	MERLIN (SCHWANNOMIN).	377-407	532-566								
PMERO_HUMAN	MEROSIN HEAVY CHAIN (LAMININ CHAIN A3) (FRAGMENT).	71-105	139-173	431-458	791-818						
PMGMT_HUMA	METHYLATED-DNA--PROTEIN-CYSTEINE METHYLTRANSFERASE (EC 2.1.1.63) (6-O-	91-118									
PMKLP_HUMAN	MITOTIC KINESIN-LIKE PROTEIN-1.	207-234	319-346	510-537	549-608						
PMLCH_HUMAN	MELANIN-CONCENTRATING HORMONE PRECURSOR.	8-33									
PMLK1_HUMAN	MIXED LINEAGE KINASE 1 (EC 2.7.1.-) (FRAGMENT).	136-157	321-348								
PMMSA_HUMA	METHYLMALONATE-SEMIALDEHYDE DEHYDROGENASE	393-420									
PMOES_HUMAN	MOESIN (MEMBRANE-ORGANIZING EXTENSION SPIKE PROTEIN).	119-146	351-403								
PMPCP_HUMAN	MITOCHONDRIAL PHOSPHATE CARRIER PROTEIN PRECURSOR.	216-313									
PMPD1_HUMAN	M-PHASE INDUCER PHOSPHATASE 3 (EC 3.1.3.48).	72-99									
PMPKA_HUMAN	DUAL SPECIFICITY MITOGEN-ACTIVATED PROTEIN KINASE KINASE (EC 2.7.1.-).	19-50									
PMPTU_HUMAN	CATION-INDEPENDENT MANNOSE-6-PHOSPHATE RECEPTOR PRECURSOR (CI MAN-6-	1369-1396	2437-2478								
PMRP_HUMAN	MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN.	396-423	507-548								
PMSHR_HUMAN	MELANOCYTE STIMULATING HORMONE RECEPTOR (MSH-R) (MELANOTROPIN	38-65									
PMSRE_HUMAN	MACROPHAGE SCAVENGER RECEPTOR TYPES I AND II (MACROPHAGE ACETYLATED	172-204	220-260								
PMTDM_HUMA	DNA (CYTOSINE-)-METHYLTRANSFERASE (EC 2.1.1.37) (DNA	387-414	601-638								
PMTF1_HUMAN	MITOCHONDRIAL TRANSCRIPTION FACTOR 1 PRECURSOR (MTTF1).	181-212									
PMUTA_HUMAN	METHYLMALONYL-COA MUTASE PRECURSOR (EC 5.4.99.2) (MCM).	468-519									
PMX1_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXA (INTERFERON-	109-130									
PMXB_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MXB (P78-RELATED	431-459	670-697								
PMYBA_HUMA	MYB-RELATED PROTEIN A (FRAGMENT).	619-646									
PMYBB_HUMAN	MYB-RELATED PROTEIN B.	87-117									
PMYCN_HUMA	N-MYC PROTO-ONCOGENE PROTEIN.	263-300	413-461								
PMYC_HUMAN	MYC PROTO-ONCOGENE PROTEIN.	393-422									
PMYF4_HUMAN	MYOGENIC FACTOR MYF-4 (MYOGENIN).	119-146									
PMYF5_HUMAN	MYOGENIC FACTOR MYF-5.	121-148									
PMYP2_HUMAN	MYELIN P2 PROTEIN.	76-110									
PMYPR_HUMAN	MYELIN PROTEOLIPID PROTEIN (PLP) (LIPOPHILIN) (CONTAINS: MYELIN	43-70									
PMYSA_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE ALPHA ISOFORM (FRAGMENT).	38-75	84-111	137-178	216-334	398-435	440-485				
PMYSB_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE BETA ISOFORM.	48-75	951-981	997-1044	1088-1122	1192-1234	1266-1332	1360-1401	1442-1479	1488-1532	
PMYSE_HUMAN	MYOSIN HEAVY CHAIN, FAST SKELETAL MUSCLE, EMBRYONIC.	1341-1382	1640-1681	1683-1710	1801-1838						
		46-73	860-903	952-1017	1119-1146	1193-1235	1267-1340	1364-1411	1483-1597	1641-1675	
PMYSP_HUMAN	MYOSIN HEAVY CHAIN, PERINATAL CARDIAC MUSCLE (FRAGMENT).	1707-1734	1827-1858								
		30-77	95-125	141-188	215-272	403-483	507-552	586-624	685-736	784-818	
PNYSS_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (FRAGMENT).	823-907	946-987	1069-1076							
		133-160	193-280	304-349	423-460	468-526	581-608	643-681	743-798	804-835	
PNYT1_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT).		846-877								
PNCA2_HUMAN	SODIUM/CALCIUM EXCHANGER PRECURSOR (NA+/CA2+-EXCHANGE PROTEIN).	640-678									
PNCAD_HUMAN	NEURAL CELL ADHESION MOLECULE, PHOSPHATIDYLINOSITOL-LINKED ISOFORM	493-519	594-621	705-733							
PNCF1_HUMAN	NEUTROPHIL CYTOSOL FACTOR 1 (NCF-47K) (47 KD AUTOSOMAL CHRONIC	255-282									
PNCF2_HUMAN	NEUTROPHIL NADPH OXIDASE FACTOR (P67-PHOX).	234-261	310-337								
PNEFA_HUMAN	DNA-BINDING PROTEIN NEFA PRECURSOR.	5-32									
PNEP_HUMAN	NEPRILYSIN (EC 3.4.24.11) (NEUTRAL ENDOPEPTIDASE) (NEP).	40-77	82-112	343-595							
PNF1_HUMAN	NEUROFIBROMIN (NEUROFIBROMATOSIS-RELATED PROTEIN NF-1) (FRAGMENT).	170-216	644-671								
PNFH_HUMAN	NEUROFILAMENT TRIPLET H PROTEIN (200 KD NEUROFILAMENT PROTEIN) (NF-H).	1145-1172	1388-1432	1639-1666							
PNFL_HUMAN	NEUROFILAMENT TRIPLET L PROTEIN (68 KD NEUROFILAMENT PROTEIN) (NF-L).	91-128	431-490								
PNFM_HUMAN	NEUROFILAMENT TRIPLET M PROTEIN (160 KD NEUROFILAMENT PROTEIN) (NF-M).	92-126	441-468								
PNK1R_HUMAN	SUBSTANCE-P RECEPTOR (SPR) (NK-1 RECEPTOR) (NK-1R).	101-141	164-194	213-280	315-372	737-764	794-826	872-913			
PNK4_HUMAN	NATURAL KILLER CELLS PROTEIN 4 PRECURSOR.	338-365									
		166-193									

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PCGENE	107a178a4 Motif Search on All Human Protein Sequences	AREA 1	AREA 1	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 1	AREA 2
CYLA_HUMAN	NK-TUMOR RECOGNITION PROTEIN (NATURAL-KILLER CELLS CYCLOPHILIN-	187-214	448-475	559-599	701-742	816-84)	(940-1113)	...		
NKOA_HUMAN	NKG1-A AND NKG1-B TYPE II INTEGRAL MEMBRANE PROTEINS.	28-55								
NMO3_HUMAN	NITRIC-OXIDE SYNTHASE, BRAIN (EC 1.14.13.39) (NOS, TYPE I).	389-416	1116-1146	1292-1319						
NMO3_HUMAN	NITRIC-OXIDE SYNTHASE, ENDOTHELIAL (EC 1.14.13.39) (EC-NOS) (NOS.	389-416								
PMTG1_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT GABA TRANSPORTER 1.	131-158								
PMTR_HUMAN	NEUROTENSIN RECEPTOR (NT-R).	57-84								
PMT5E_HUMAN	SODIUM-DEPENDENT SEROTONIN TRANSPORTER (5HT TRANSPORTER) (5HTT)	71-98								
PMTTA_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT TAURINE TRANSPORTER.	126-147								
PMUM_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 3 (EC 1.6.5.3).	203-240								
PMUM_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 4 (EC 1.6.5.3).	164-191	173-199							
PMUN_HUMAN	NUCLEOMYON PRECURSOR.	46-73	160-187							
PNUC_HUMAN	NUCLEOLIN (PROTEIN C3).	462-508								
PNYA_HUMAN	PUTATIVE NEUROPEPTIDE Y RECEPTOR TYPE 3 (NPY3-R) (FB32) (NPYRL).	115-142								
POAT_HUMAN	ORNITHINE AMINOTRANSFERASE PRECURSOR (EC 2.6.1.13) (ORNITHINE--OXO).	98-128								
POC1A_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 1A (OCT-1A).	139-173								
POC1B_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 1B (OCT-1B).	37-78								
POCBL_HUMAN	LOWE'S OCULOCEREBRORENAL SYNDROME PROTEIN.	704-733								
PODB3_HUMAN	LIPOAMIDE ACYLTRANSFERASE COMPONENT (E2) PRECURSOR OF BRANCHED-CHA	100-137	175-402							
PODP2_HUMAN	DIHYDROLIPOAMIDE ACETYLTRANSFERASE COMPONENT (E2) OF PYRUVATE	72-99								
POMOP_HUMAN	OLIGODENDROCYTE-MYELIN GLYCOPROTEIN PRECURSOR (OMG).	53-80								
POPSB_HUMAN	BLUE-SENSITIVE OPSIN (BLUE CONE PHOTORECEPTOR PIGMENT).	220-247								
POPSG_HUMAN	GREEN-SENSITIVE OPSIN (GREEN CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
POPSR_HUMAN	RED-SENSITIVE OPSIN (RED CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
POSTP_HUMAN	OSTEOPONTIN PRECURSOR (BONE SIALOPROTEIN I) (URINARY STONE PROTEIN)	218-266								
POTC_HUMAN	ORNITHINE CARBAMOYLTRANSFERASE PRECURSOR (EC 2.1.3.3).	176-204								
POTNC_HUMAN	OSTEONECTIN PRECURSOR (BASEMENT MEMBRANE PROTEIN BM-40).	171-207								
POXY3_HUMAN	OXYSTEROL-BINDING PROTEIN.	89-123	190-217	290-317	577-604					
POXYN_HUMAN	OXYTOCIN RECEPTOR (OT-R).	330-377								
PP107_HUMAN	RETINOBLASTOMA-ASSOCIATED PROTEIN-LIKE 107 KD HOMOLOG (P107)	119-186	422-449							
PP1DP_HUMAN	DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1.	19-60	617-664							
PP47_HUMAN	PLECKSTRIN (P47).	298-325								
PPAH4_HUMAN	PROLYL 4-HYDROXYLASE ALPHA SUBUNIT PRECURSOR (EC 1.14.11.2).	29-69	191-218							
PPAO_HUMAN	MITOCHONDRIAL MATRIX PROTEIN P1 PRECURSOR (P60 LYMPHOCYTE PROTEIN)	72-99	271-298	361-407						
PPIA_HUMAN	PHOSPHATIDYLINOSITOL 3-KINASE REGULATORY ALPHA SUBUNIT (PID-KINASE	13-39	428-476	586-613	686-713					
PPAP1_HUMAN	PANCREATITIS ASSOCIATED PROTEIN 1 PRECURSOR.	77-104								
PPAX3_HUMAN	PAIRED BOX PROTEIN PAX-3 (B-CELL SPECIFIC TRANSCRIPTION FACTOR)	137-187								
PPDGA_HUMAN	PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)	38-65								
PPECI_HUMAN	PLATELET ENDOTHELIAL CELL ADHESION MOLECULE PRECURSOR (PECAM-1)	685-719								
PPENK_HUMAN	PROENKEPHALIN A PRECURSOR.	142-176								
PPEPE_HUMAN	EOSINOPHIL PEROXIDASE PRECURSOR (EC 1.11.1.7) (EPO) (FRAGMENT)	308-335								
PPERF_HUMAN	PERFORIN 1 PRECURSOR (P1) (LYMPHOCYTE PORE FORMING PROTEIN) (PFP).	411-438								
PPFAL_HUMAN	PLATELET BASIC PROTEIN PRECURSOR (PBP) (CONTAINS: CONNECTIVE-TISSUE	21-55								
PPGCA_HUMAN	CASTLAGE-SPECIFIC PROTEOGLYCAN CORE PROTEIN PRECURSOR (CSPCP)	73-100								
PPGCS_HUMAN	LARGE FIBROBLAST PROTEOGLYCAN PRECURSOR (VERSICAN) (CHONDROITIN	64-98	1390-1417	1533-1560						
PPGDH_HUMAN	15-HYDROXYPROSTAGLANDIN DEHYDROGENASE (NAD(+)) (EC 1.1.1.141) (PGDH).	87-118								
PPGDR_HUMAN	BETA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112).	294-321	354-384	485-495						
PPGD3_HUMAN	ALPHA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR.	64-94	347-395	461-488	524-551	986-1058				
PPGHS_HUMAN	PROSTAGLANDIN G/H SYNTHASE PRECURSOR (EC 1.14.99.1) (CYCLOOXYGENASE)	331-358								
PPGS1_HUMAN	BONE/CARTILAGE PROTEOGLYCAN I PRECURSOR (BIGLYCAN) (PG-S1).	100-127								
PPH4H_HUMAN	PHENYLALANINE-4-HYDROXYLASE (EC 1.14.16.1) (PAH) (PHE-4-	219-266								
PPHB_HUMAN	PROHIBITIN.	41-68								
PPHO5_HUMAN	PHOSPHOLIPASE D3 (PHOSPHOLIPASE D HOMOLOG 1) (PLD3).	184-223								
PPHS1_HUMAN	PHOSDUCIN (33 KD PHOTOTRANSDUCING PROTEIN) (MEKA PROTEIN).	116-143								
PPHS3_HUMAN	GLYCOGEN PHOSPHORYLASE, LIVER FORM (EC 2.4.1.1).	532-559								
PPHSJ_HUMAN	GLYCOGEN PHOSPHORYLASE, MUSCLE FORM (EC 2.4.1.1).	533-560								
PPIP4_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE BETA 2	908-935								

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PGENE	1671178.t Medl Search on All Human Protein Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN									
PPDP_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE GAMMA 2	142-169	239-266							
PPLAE_HUMAN	PLAKOGLOBIN (DESMOPLAKIN III)	373-400								
PPLSL_HUMAN	L-PLASTIN (FIMBRIN).	307-334								
PPLST_HUMAN	T-PLASTIN (FIMBRIN).	310-361								
PPMJ3_HUMAN	PERIPHERAL MYELIN PROTEIN 22 (PMP-22).	3-33								
PPMGB_HUMAN	PHOSPHOGLYCERATE MUTASE, BRAIN FORM (EC 5.4.2.1) (PGAM-B) (EC 5.4.2.4)	81-111								
PPMGM_HUMA	PHOSPHOGLYCERATE MUTASE, MUSCLE FORM (EC 5.4.2.1) (PGAM-M)	81-115								
PPMLI_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-1.	551-585								
PPMLX_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-X	551-585								
PPNSC_HUMAN	AUTOANTIGEN PM-SCL.	103-130								
PPOGA_HUMAN	DNA-BINDING PROTEIN PO-GA.	14-51	182-209	610-637	667-699					
PPOL1_HUMAN	RETROVIRUS-RELATED POL POLYPROTEIN (REVERSE TRANSCRIPTASE	774-804								
PPOL2_HUMAN	RETROVIRUS-RELATED POL POLYPROTEIN (FRAGMENT).	78-138	171-205							
PPORJ_HUMAN	OUTER MITOCHONDRIAL MEMBRANE PROTEIN PORIN (VOLTAGE-DEPENDENT ANIO	33-76	189-216							
PPPAP_HUMAN	PROSTATIC ACID PHOSPHATASE PRECURSOR (EC 3.1.3.2).	215-269								
PPPA5_HUMAN	RED CELL ACID PHOSPHATASE 1, ISOZYME 5 (EC 3.1.3.2) (ACP1).	26-53								
PPPOL_HUMAN	NAD(+) ADP-RIBOSYLTRANSFERASE (EC 2.4.2.30) (POLY(ADP-RIBOSE)	699-729	971-1003							
PPRC1_HUMAN	PROTEASOME COMPONENT C1 (EC 3.4.99.46) (MACROPAIN SUBUNIT C1)	39-66								
PPRC2_HUMAN	PROTEASOME COMPONENT C2 (EC 3.4.99.46) (MACROPAIN SUBUNIT C2)	34-61								
PPRC9_HUMAN	PROTEASOME COMPONENT C9 (EC 3.4.99.46) (MACROPAIN SUBUNIT C9)	203-261								
PPRGR_HUMAN	PROGESTERONE RECEPTOR (PR) (FORMS A AND B).	846-890								
PPRT3_HUMAN	VITAMIN K-DEPENDENT PROTEIN S (BLOOD CLOTTING) PRECURSOR.	337-371								
PPRTZ_HUMAN	VITAMIN K-DEPENDENT PROTEIN Z PRECURSOR.	29-56								
PPSOR_HUMAN	PSORIASIN.	65-92								
PPSPD_HUMAN	PULMONARY SURFACTANT-ASSOCIATED PROTEIN D PRECURSOR (PSP-D) (SP-D).	224-251								
PPTHY_HUMAN	PARATHYROID HORMONE PRECURSOR (PARATHYRIN).	84-113								
PPTN1_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1B (EC 3.1.3.48) (PTP-1B).	136-177								
PPTN2_HUMAN	T-CELL PROTEIN-TYROSINE PHOSPHATASE (EC 3.1.3.48) (TCPTP).	59-86	138-178							
PPTN6_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1C (EC 3.1.3.48) (PTP-1C) (HEMATOPOIETIC	227-261	512-580							
PPTNB_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 2C (EC 3.1.3.48) (PTP-2C) (PTP-1D)	41-68	218-245							
PPTNC_HUMAN	PROTEIN-TYROSINE PHOSPHATASE G1 (EC 3.1.3.48) (PTPG1).	618-645	695-722							
PPTR_HUMAN	PARATHYROID HORMONE/PARATHYROID HORMONE-RELATED PEPTIDE	368-395								
PPTTO_HUMAN	PENTAXIN-RELATED PROTEIN PTX PRECURSOR.	74-101								
PPUR3_HUMAN	PHOSPHORIBOSYLGLYCINAMIDE--GLYCINE LIGASE (EC 6.3.4.13) (GARS) (GLYCINAMIDE	803-830								
PPUR6_HUMAN	MULTIFUNCTIONAL PROTEIN ADE2H1 (PHOSPHORIBOSYLAMINOIMIDAZOLE-	391-418								
PPUR7_HUMAN	ADENYLOSUCCINATE LYASE (EC 4.3.2.2) (ADENYLOSUCCINASE) (ASL).	204-231								
PPYR3_HUMAN	URIDINE 5'-MONOPHOSPHATE SYNTHASE (UMP SYNTHASE) (OROTATE	120-150								
PPYRO_HUMAN	CTP SYNTHASE (EC 6.3.4.2) (UTP--AMMONIA LIGASE) (CTP SYNTHETASE).	86-113	308-334							
PPZP_HUMAN	PREGNANCY ZONE PROTEIN PRECURSOR.	313-334	990-1024	1162-1189	1405-1432					
PRA74_HUMAN	TRANSCRIPTION FACTOR IIF, ALPHA SUBUNIT (TFIIF, ALPHA SUBUNIT)	474-501								
PRAB4_HUMAN	RAS-RELATED PROTEIN RAB-4.	38-65								
PRAB6_HUMAN	RAS-RELATED PROTEIN RAB-6.	123-150								
PRADI_HUMAN	RADIXIN.	308-335	414-463	510-537						
PRB11_HUMAN	RAS-RELATED PROTEIN RAB-11 (24KG) (YL8).	131-178								
PRBB3_HUMAN	RETINOBLASTOMA BINDING PROTEIN 3 (RBBP-3) (RB-BINDING PROTEIN E2F-1)	138-156	161-223							
PRDP_HUMAN	RD PROTEIN.	9-53								
PREN1_HUMAN	RENIN PRECURSOR, RENAL (EC 3.4.23.15) (ANGIOTENSINOGENASE).	136-163								
PREST_HUMAN	RESTIN (CYTOPLASMIC LINKER PROTEIN-170 ALPHA-2) (CLIP-170).	190-217	333-370	445-472	571-619	744-771	784-852	1023-1050	1088-1139	1157-1184
		1216-1306								
RFA1_HUMAN	REPLICATION PROTEIN A 70 KD DNA-BINDING SUBUNIT (RF-A) (RF-A)	206-233	423-455							
RFP_HUMAN	TRANSFORMING PROTEIN (RFP) (RET FINGER PROTEIN).	183-217								
RH_HUMAN	BLOOD GROUP RH(D) POLYPEPTIDE	361-388								
RIBI_HUMAN	RIBOPHORIN I PRECURSOR.	81-108	496-530							
RIBII_HUMAN	RIBOPHORIN II PRECURSOR.	142-172	361-388							
RIBN1_HUMAN	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE M1 CHAIN (EC 1.17.4.1)	42-69	370-400							
RL23_HUMAN	60S RIBOSOMAL PROTEIN L23 (EPSTEIN-BARR VIRUS SMALL RNA ASSOCIATED	78-112								
RL36_HUMAN	60S RIBOSOMAL PROTEIN L36	55-89	103-137							

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PGENE	107x178x4 Motif Search on All Human Protein Sequences										
FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	AREA 10
PRL9_HUMAN	60S RIBOSOMAL PROTEIN L9.	146-192									
PRLA0_HUMAN	60S ACIDIC RIBOSOMAL PROTEIN P0 (L10E).	138-185									
PRO1_HUMAN	52 KD RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A)).	190-233	238-265								
PRO6_HUMAN	60 KD RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A)).	192-245									
PROC_HUMAN	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEINS C1/C2 (HNRNP C1 AND HNRNP	164-1									
PROL_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN L (HNRNPL).	501-528									
PROU_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN U.	630-657									
PUR1_HUMAN	DNA-DIRECTED RNA POLYMERASE II 215 KD POLYPEPTIDE	269-296	665-720	879-906	1314-1341	1371-1398					
PUR3_HUMAN	DNA-DIRECTED RNA POLYMERASE II 140 KD POLYPEPTIDE	626-667	1008-1033								
PUR5_HUMAN	DNA-DIRECTED RNA POLYMERASE II 33 KD POLYPEPTIDE	242-274									
RARA_HUMAN	RETINOIC ACID RECEPTOR RXR-ALPHA.	318-353									
RARB_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 1.	376-403									
RARC_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 2	396-423									
RS12_HUMAN	40S RIBOSOMAL PROTEIN S12.	60-87									
RS16_HUMAN	40S RIBOSOMAL PROTEIN S16	89-116									
RS23_HUMAN	40S RIBOSOMAL PROTEIN S23.	26-53									
RS27_HUMAN	40S RIBOSOMAL PROTEIN S27A.	14-41									
RS3_HUMAN	40S RIBOSOMAL PROTEIN S3 (S3).	73-100									
RS8_HUMAN	40S RIBOSOMAL PROTEIN S8	136-163									
RTC1_HUMAN	RAS-LIKE PROTEIN TC1	123-150									
RU1A_HUMAN	U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A (U1 SNRNP A PROTEIN)	13-47									
RU1B_HUMAN	U1 SMALL NUCLEAR RIBONUCLEOPROTEIN B".	17-24									
RYR1_HUMAN	RYANODINE RECEPTOR, SKELETAL MUSCLE	134-188	495-522	866-893	2710-2777	2826-2847	3304-3331	3539-3558	3912-3939	4921-4948	
S10A_HUMAN	S-100 PROTEIN, ALPHA CHAIN	12-34									
S10B_HUMAN	S-100 PROTEIN, BETA CHAIN	14-36									
S100_HUMAN	S-100 PROTEIN.	31-58									
SAUH_HUMAN	ADENOSYLHOMOCYSTEINASE (EC 3.3.1.1) (S-ADENOSYL-L-HOMOCYSTEINE	389-416									
SAT1_HUMAN	DNA-BINDING PROTEIN SATB1.	709-736									
SCCA_HUMAN	SQUAMOUS CELL CARCINOMA ANTIGEN (SCCA) (PROTEIN T4-A)	78-105									
SCF_HUMAN	STEM CELL FACTOR PRECURSOR (SCF)	74-101									
SEM1_HUMAN	SEMENOGELIN I PROTEIN PRECURSOR (SGI) (CONTAINS: SEMINAL BASIC	64-98	176-226	288-329	334-368						
SEM2_HUMAN	SEMENOGELIN II PRECURSOR (SGII).	71-98	183-226	304-335	405-439	539-575					
SET_HUMAN	SET PROTEIN.	38-65	134-181								
SG01_HUMAN	SECRETOGRANIN I PRECURSOR (CHROMOGRANIN B)	144-178									
SG02_HUMAN	SECRETOGRANIN II PRECURSOR (CHROMOGRANIN C).	234-281	290-317	334-361							
SIAL_HUMAN	BONE SIALOPROTEIN II PRECURSOR (BSP II).	84-113	155-193	236-283							
SNFL_HUMAN	POSSIBLE GLOBAL TRANSCRIPTION ACTIVATOR SNF2L.	231-258	345-372								
SNOB_HUMAN	SKI-RELATED ONCOGENE SNON.	414-441									
SPCA_HUMAN	SPECTRIN ALPHA CHAIN.	193-220	370-621	655-712	1099-1126	1461-1502	1882-1909	1988-2022	2120-2154	2223-2250	
		2346-2373									
SPCB_HUMAN	SPECTRIN BETA CHAIN, ERYTHROCYTE.	150-177	316-350	486-520	648-675	987-1021	1027-1083	1287-1324	1347-1374	1814-1861	
SPRE_HUMAN	SEPIAPTERIN REDUCTASE (EC 1.1.1.153) (SPR).	90-124									
SRF_HUMAN	SERUM RESPONSE FACTOR (SRF).	77-104	480-507								
SRPA_HUMAN	SIGNAL RECOGNITION PARTICLE RECEPTOR ALPHA SUBUNIT (SR-ALPHA).	76-110									
SSR1_HUMAN	SOMATOSTATIN RECEPTOR TYPE 1.	289-316									
STHM_HUMAN	STATHMIN (PHOSPHOPROTEIN P19) (ONCOPROTEIN P18) (LEUKEMIA-ASSOCIATED	47-74									
SUIS_HUMAN	SUCRASE-ISOMALTASE, INTESTINAL (EC 3.2.1.48) / (EC 3.2.1.10).	1748-1775									
SYB1_HUMAN	SYNAPTOBREVIN 1.	31-67									
SYD2_HUMAN	ASPARTYL-TRNA SYNTHETASE ALPHA-2 SUBUNIT (EC 6.1.1.12) (ASPARTATE-	44-71									
SYEP_HUMAN	MULTIFUNCTIONAL AMINOACYL-TRNA SYNTHETASE (CONTAINS: GLUTAMYL-TRN	174-201	746-771								
SYH_HUMAN	HISTIDYL-TRNA SYNTHETASE (EC 6.1.1.21) (HISTIDINE-TRNA LIGASE).	380-442	468-502								
SYT1_HUMAN	SYNAPTOTAGMIN I (P65).	140-167	230-277								
SYTC_HUMAN	THREONYL-TRNA SYNTHETASE, CYTOPLASMIC (EC 6.1.1.3) (THREONINE--TRNA	497-524	638-685								
SYV_HUMAN	VALYL-TRNA SYNTHETASE (EC 6.1.1.9) (VALINE--TRNA LIGASE) (VALRS).	230-257	413-440								
SYW_HUMAN	TRYPTOPHANYL-TRNA SYNTHETASE (EC 6.1.1.2) (TRYPTOPHAN--TRNA LIGASE).	93-127	196-223								
T2B_HUMAN	TRANSCRIPTION INITIATION FACTOR IIB-BETA CHAIN (TFIIB-BETA).	34-68									
TFA4_HUMAN	TRANSCRIPTION FACTOR AP-4 (FRAGMENT).	169-196	245-272								

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PCGENE	1971:1984 Medl Search on All Human Protein Sequences								
FILE NAME	PROTEIN	AREA 1	AREA 1	AREA 1	AREA 1	AREA 3	AREA 4	AREA 1	AREA 2
PTAJB_HUMAN	TRANSCRIPTION FACTOR JUN-B.	196-323							
PTAJD_HUMAN	TRANSCRIPTION FACTOR JUN-D.	291-333							
PTAU1_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU.	238-305							
PTAU2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU, FETAL.	211-238							
PTCO1_HUMAN	TRANSCOBALAMIN I PRECURSOR.	201-241	330-357						
PTCP1_HUMAN	T-COMPLEX PROTEIN 1 (TCP-1).	316-343							
PTDT_HUMAN	DNA NUCLEOTIDYLEXOTRANSFERASE (EC 2.7.7.31) (TERMINAL ADDITION ENZYME).	61-95							
PTEK_HUMAN	RECEPTOR TYROSINE PROTEIN KINASE TEK PRECURSOR (EC 2.7.1.112) (HPK-6).	644-678	969-996	1007-1036					
PTF2B_HUMAN	TRANSCRIPTION INITIATION FACTOR IIB (TFIIB).	135-162							
PTFE1_HUMAN	TRANSCRIPTION FACTOR E1 (FRAGMENT).	43-70	132-149	178-226					
PTFS2_HUMAN	TRANSCRIPTION ELONGATION FACTOR S-II.	29-56							
PTF_HUMAN	TISSUE FACTOR PRECURSOR (TF) (COAGULATION FACTOR III).	148-175							
PTGF1_HUMAN	TRANSFORMING GROWTH FACTOR BETA 1 PRECURSOR (TGF-BETA 1).	148-185							
PTGF1_HUMAN	TRANSFORMING GROWTH FACTOR BETA 2 PRECURSOR (TGF-BETA 2) (GLIOBLASTOMA-DERIVED T-CELL SUPPRESSOR FACTOR) (BSC-1 CELL GROWTH INHIBITOR) (CELL GROWTH INHIBITORY FACTOR) (G-CSF-INDUCING FACTOR) (PRO-COLLAGEN-BINDING GROWTH FACTOR).	243-270							
PTGFA_HUMAN	TRANSFORMING GROWTH FACTOR ALPHA PRECURSOR (TGF-ALPHA) (EGF-LIKE TGF).	87-114							
PTGLK_HUMAN	PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE K (EC 2.3.2.13).	258-285							
PTHBS_HUMAN	THROMBOSPONDIN PRECURSOR.	110-165	284-314						
PTHIK_HUMAN	3-KETOACYL-COA THIOLASE PEROXISOMAL PRECURSOR (EC 2.3.1.16) (BETA-KETOTHIOLASE) (ACETYL-COA ACYLTRANSFERASE) (PEROXISOMAL 3-OXOACYL-COA THIOLASE) (PEROXISOMAL 3-KETOACYL-COA THIOLASE) (SCP2-LIKE).	185-212							
PTKN8_HUMAN	PROTACHYKININ BETA PRECURSOR (CONTAINS: SUBSTANCE P, NEUROKININ A (NEUROMEDIN L)).	11-38							
PTLE1_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 1.	626-653							
PTLE2_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 2.	94-125							
PTLE4_HUMAN	TRANSDUCIN-LIKE ENHANCER PROTEIN 4 (FRAGMENT).	304-331							
PTOPA_HUMAN	DNA TOPOISOMERASE II, ALPHA ISOZYME (EC 5.99.1.3).	19-46	501-532						
PTOPB_HUMAN	DNA TOPOISOMERASE II, BETA ISOZYME (EC 5.99.1.3).	35-63	616-647						
PTPM1_HUMAN	TROPOMYOSIN, FIBROBLAST ISOFORM TM1.	16-74	82-116						
PTPMA_HUMAN	TROPOMYOSIN ALPHA CHAIN, SKELETAL MUSCLE.	16-43	47-74	82-116	147-174	191-237	243-277		
PTPMC_HUMAN	TROPOMYOSIN BETA CHAIN, SKELETAL MUSCLE.	35-116	191-240						
PTPMF_HUMAN	TROPOMYOSIN ALPHA CHAIN, CARDIAC MUSCLE.	16-74	82-116	193-277					
PTPMG_HUMAN	TROPOMYOSIN, FIBROBLAST AND EPITHELIAL MUSCLE-TYPE (TM30) (TME1).	35-116	210-240	243-270					
PTPMI_HUMAN	TROPOMYOSIN, FIBROBLAST NON-MUSCLE TYPE (TM30PL).	46-80	111-138	158-199	207-234				
PTPMJ_HUMAN	TROPOMYOSIN, CYTOSKELETAL TYPE (TM30NM).	46-80	111-138	172-199					
PTPN5_HUMAN	TROPOMYOSIN ALPHA CHAIN, SMOOTH MUSCLE (FRAGMENT).	35-59	147-178						
PTPP3_HUMAN	TRIPEPTIDYL-PEPTIDASE II (EC 3.4.14.10) (TPP II) (TRIPEPTIDYL AMINOPEPTIDASE) (TRIPEPTIDYL PEPTIDASE II).	153-187	1004-1031	1160-1187					
PTPR_HUMAN	TPR ONCOGENE (FRAGMENT).	82-147							
PTR16_HUMAN	TREB16 PROTEIN.	18-45	242-269						
PTRJR_HUMAN	THYROTROPIN-RELEASING HORMONE RECEPTOR (TRH-R) (THYROLIBERIN RECEPTOR) (TRH RECEPTOR) (PITUITARY ADENYLATE CYCLASE-ACTIVATING POLYPEPTIDE RECEPTOR) (PACAP RECEPTOR).	308-383							
PTRJC_HUMAN	TROPONIN I, CARDIAC MUSCLE.	36-63							
PTRCA_HUMAN	HIGH AFFINITY NERVE GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112) (GP140-TRK) (P140-TRK) (TRK TRANSFORMING TYROSINE KINASE PROTEIN).	66-93	117-144						
PTRSR_HUMAN	TRANSFERRIN RECEPTOR PROTEIN (TR) (ANTIGEN CD71) (T9).	188-215	366-393						
PTSHR_HUMAN	THYROTROPIN RECEPTOR PRECURSOR (TSH-R).	87-117	420-447						
PTTK_HUMAN	PROTEIN KINASE TKK (EC 2.7.1.-).	170-197	324-359	510-544	549-583				
PTYK2_HUMAN	NON-RECEPTOR TYROSINE-PROTEIN KINASE TYK2 (EC 2.7.1.112).	150-177							
PUBA1_HUMAN	UBIQUITIN-ACTIVATING ENZYME E1 (A1S9 PROTEIN).	448-475							
PUBF1_HUMAN	NUCLEOLAR TRANSCRIPTION FACTOR 1 (UPSTREAM BINDING FACTOR 1) (UBF-1).	227-254							
PUDP0_HUMAN	UDP-GLUCURONOSYLTRANSFERASE PRECURSOR, MICROSOMAL (EC 2.4.1.17).	227-254							
PUFO_HUMAN	RECEPTOR TYROSINE-PROTEIN KINASE UFO PRECURSOR (EC 2.7.1.112).	488-522							
PUSF1_HUMAN	UPSTREAM STIMULATORY FACTOR 1.	251-295							
PVATC_HUMAN	VACUOLAR ATP SYNTHASE SUBUNIT C (EC 3.6.1.34) (V-ATPASE C SUBUNIT).	47-74	117-147						
PVIL1_HUMAN	VILLIN.	338-372	427-461	513-544					
PVIME_HUMAN	VIMENTIN.	119-146	233-260						
PVINC_HUMAN	VINCULIN.	108-135							
PVPRT_HUMAN	RETROVIRUS-RELATED PROTEASE (EC 3.4.23.-).	95-134							
PWEE1_HUMAN	WEE1-LIKE PROTEIN KINASE (EC 2.7.1.112).	334-388							
PWT1_HUMAN	WILMS' TUMOR PROTEIN (WT33).	247-274							
PXBP1_HUMAN	X BOX BINDING PROTEIN-1 (XBP-1) (TREB5 PROTEIN).	97-133							
PXPAC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-A CELLS (XERODERMA PIGMENTOSUM GROUP A PROTEIN).	180-211							
PXPCC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-C CELLS (XERODERMA PIGMENTOSUM GROUP C PROTEIN).	134-168	701-738						

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PCGENE	103:1784 Model Search on All Human Protein Sequences											
		AREA 1	AREA 1	AREA 1	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	AREA 9	AREA 9
FILENAME	PROTEIN											
XPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-D CELLS (XERODERMA PIGMENTOSUM	264-291										
XPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-D CELLS (XERODERMA PIGMENTOSUM	83-110	715-766	1047-1081								
XPCC_HUMAN	DNA-REPAIR PROTEIN XPCC1.		23-57									
XPCC_HUMAN	DNA-REPAIR PROTEIN XPCC1.		29-56									
PZN10_HUMAN	ZINC FINGER PROTEIN 10 (ZINC FINGER PROTEIN KOX1) (FRAGMENT).		17-62	307-334	1071-1098	1409-1500	2011-2057	2146-2181				
PZN40_HUMAN	ZINC FINGER PROTEIN 40 (HUMAN IMMUNODEFICIENCY VIRUS TYPE I ENHANCER-		3-30	201-228								
PZN43_HUMAN	ZINC FINGER PROTEIN 43 (HKR1744) (FRAGMENT).											
PZN46_HUMAN	ZINC FINGER PROTEIN 46 (ZINC FINGER PROTEIN KUP).		121-149									

BAD ORIGINAL

TABLE X

Search Results Summary for PCTLZIP, P1CTLZIP, and P2CTLZIP Motifs

PCTL2IP			P1CTL2IP					P2CTL2IP			
LIBRARY FILE			LIBRARY FILE					LIBRARY FILE			
PENV_FOAMV	481-496		PENV_BIV06	434-450				PENV_BIV06	525-542		
PENV_HV1MA	436-453		PENV_BIV27	463-479				PENV_BIV27	564-571		
PENV_HV1MF	183-198		PENV_FOAMV	481-496	864-880			PENV_FENV1	30-47	630-647	
PENV_HV1RH	445-460		PENV_HV1KB	752-768				PENV_FIVP5	781-798		
PENV_HV1SC	186-201		PENV_HV1MA	437-453				PENV_FIV8D	778-796		
PENV_HV1Z2	123-138		PENV_HV1MF	183-198				PENV_FIVT2	780-797		
PENV_HV1ZH	436-453		PENV_HV1RH	444-460				PENV_FLVC6	38-56	624-641	
PENV_HV2BE	760-765		PENV_HV1S1	738-754				PENV_FLVGL	605-622		
PENV_HV2D1	741-756		PENV_HV1SC	186-201				PENV_FLVLB	625-642		
PENV_HV2G1	741-756		PENV_HV1Z2	123-138				PENV_FLV8A	602-619		
PENV_HV2NZ	742-757		PENV_HV1Z3	117-133				PENV_FOAMV	710-727	957-974	
PENV_HV2RO	751-766		PENV_HV1ZH	437-453				PENV_F8VGA	625-642		
PENV_HV2S8	743-758		PENV_HV2BE	760-765				PENV_F8VGB	605-622		
PENV_HV2ST	746-760		PENV_HV2D1	741-756				PENV_F8VBM	608-625		
PENV_J9RV	104-119		PENV_HV2G1	741-756				PENV_HV1GY	123-140		
PENV_MMTVB	616-633		PENV_HV2NZ	742-757				PENV_HV1Z2	410-427		
PENV_MMTVG	616-633		PENV_HV2RO	751-766				PENV_HV1Z3	154-171		
PENV_SIVMK	139-154		PENV_HV2S8	743-758				PENV_HV2CA	760-767		
PENV_SIVML	139-154		PENV_HV2ST	746-760				PENV_MCFF	600-617		
PHEMA_CVBLY	391-408		PENV_J9RV	104-119	641-657			PENV_MCFF3	601-618		
PHEMA_CVBM	391-408		PENV_MCFF	397-413				PENV_MLVAV	630-647		
PHEMA_CVBQ	391-408		PENV_MCFF3	397-413				PENV_MLVC8	625-642		
PHEMA_CVHOC	391-408		PENV_MLVAV	427-443				PENV_MLVF6	639-656		
PHEMA_CVMA6	402-417		PENV_MLVC8	422-438				PENV_MLVFF	639-656		
PHEMA_CVMS	403-418		PENV_MLVHO	423-439				PENV_MLVFP	639-656		
PHEMA_INBAA	295-310		PENV_MLVMO	426-442				PENV_MLVHO	626-643		
PHEMA_INBBE	303-318		PENV_MLVRD	424-440				PENV_MLVKI	167-184		
PHEMA_INBBO	293-308		PENV_MLVRK	424-440				PENV_MLVMO	629-646		
PHEMA_INBEN	301-316		PENV_MMTVB	616-633				PENV_MLVRD	624-641		
PHEMA_INBFU	286-301		PENV_MMTVG	616-633				PENV_MLVRK	624-641		
PHEMA_INBGL	296-311		PENV_SFV1	864-880				PENV_M8VFB	170-187		
PHEMA_INBHK	293-308		PENV_SFV3L	861-877				PENV_RMCFV	603-620		
PHEMA_INBIB	288-303		PENV_SIVGB	93-109				PENV_SFV1	710-727	957-974	
PHEMA_INBIO	299-314		PENV_SIVMK	139-154	802-818			PINV_SFV3L	707-724	954-971	
PHEMA_INBLE	302-317		PENV_SIVML	139-154	801-817			PENV_SIVM1	766-783		
PHEMA_INBMD	292-307		PENV_SIVS4	806-822				PENV_SIVMK	765-782		
PHEMA_INBME	296-311		PENV_SIVSP	810-826				PENV_SIVML	764-781		
PHEMA_INBNA	288-303		PHEMA_CDVO	36-52				PENV_SIVS4	769-786		
PHEMA_INBOR	301-316		PHEMA_CVBLY	391-408				PENV_SIVSP	773-790		
PHEMA_INBSI	201-316		PHEMA_CVBM	391-408				PENV_SMRVH	536-553		
PHEMA_INBSJ	298-313		PHEMA_CVBQ	391-408				PENV_SMSAV	42-59		
PHEMA_INBUS	294-309		PHEMA_CVHOC	391-408				PHEMA_CDVO	36-53	200-217	
PHEMA_INBVI	296-311		PHEMA_CVMA6	402-417				PHEMA_CVBLY	391-408		
PHEMA_INBVK	303-318		PHEMA_CVMS	403-418				PHEMA_CVBM	391-408		
PHEMA_INBYB	286-301		PHEMA_IAAIC	237-253				PHEMA_CVBQ	391-408		

PHEMA_MUMPM	133-148		PHEMA_IABAN	221-237				PHEMA_CVHOC	391-408		
PHEMA_MUMPR	133-148		PHEMA_IABUD	234-250				PHEMA_IAAIC	322-339		
PHEMA_MUMPS	133-148		PHEMA_IACKA	234-250				PHEMA_IABAN	306-323		
PHEMA_PI1HW	345-360		PHEMA_IACKG	231-247				PHEMA_IABUD	320-337		
PHEMA_PI2H	65-80		PHEMA_IACKV	230-246				PHEMA_IACKA	320-337		
PHEMA_PI2HT	65-80		PHEMA_IADA1	234-250				PHEMA_IACKG	316-333		
PHEMA_RINDK	366-383		PHEMA_IADA3	237-253				PHEMA_IACKP	302-319		
PHEMA_SV5	7-94		PHEMA_IADCZ	234-250				PHEMA_IACKQ	302-319		
PHEMA_SV5CM	7-94		PHEMA_IADH1	221-237				PHEMA_IACKS	319-336		
PHEMA_SV5CP	7-94		PHEMA_IADH2	221-237				PHEMA_IACKV	316-332		
PHEMA_SV5LN	7-94		PHEMA_IADH3	221-237				PHEMA_IADA1	320-337		
PVENV_DHVI1	42-57		PHEMA_IADH4	221-237				PHEMA_IADA3	322-339		
PVFP7_CAPVK	89-104		PHEMA_IADH5	221-237				PHEMA_IADCZ	320-337		
PVFUS_VACCG	72-87		PHEMA_IADH6	221-237				PHEMA_IADH1	306-323		
PVG01_BPP22	242-257		PHEMA_IADH7	221-237				PHEMA_IADH2	306-323		
PVG01_HSVE8	169-184		PHEMA_IADM2	237-253				PHEMA_IADH3	306-323		
PVG01_HSVI1	210-226	317-332	PHEMA_IADNZ	234-250				PHEMA_IADH4	306-323		
PVG06_BPT4	184-199		PHEMA_IAEN6	221-237				PHEMA_IADH6	306-323		
PVG07_BPT4	886-900		PHEMA_IAEN7	237-253				PHEMA_IADH7	306-323		
PVG08_HSVI1	134-149		PHEMA_IAFPR	230-246				PHEMA_IADM2	322-339		
PVG10_BPPH2	183-198		PHEMA_IAHAL	236-252				PHEMA_IADNZ	320-337		
PVG10_BPPZA	183-198		PHEMA_IAHAR	235-251				PHEMA_IADU3	322-339		
PVG10_HSV8A	109-124		PHEMA_IAHC6	230-246				PHEMA_IAEN6	306-323		
PVG16_BPP1	81-96		PHEMA_IAHC7	230-246				PHEMA_IAEN7	322-339		
PVG18_BPT4	468-483		PHEMA_IAHCD	230-246				PHEMA_IAFPR	316-332		
PVG25_BPT4	97-112		PHEMA_IAHDE	230-246				PHEMA_IAGRE	320-337		
PVG29_HSVI1	20-35		PHEMA_IAHFO	236-252				PHEMA_IAGU2	320-337		
PVG30_BPPH8	11-94		PHEMA_IAHK6	236-252				PHEMA_IAGUA	319-336		
PVG36_BPOX2	22-37		PHEMA_IAHK7	236-252				PHEMA_IAHAL	321-338		
PVG36_HSV8A	108-123		PHEMA_IAHLE	230-246				PHEMA_IAHC6	316-332		
PVG37_BPT2	1253-1268		PHEMA_IAHLO	230-246				PHEMA_IAHC7	316-332		
PVG37_HSVI1	284-299		PHEMA_IAHMI	236-252				PHEMA_IAHCD	316-332		
PVG55_HSVI1	22-37	143-158	PHEMA_IAHNM	236-252				PHEMA_IAHDE	316-332		
PVG56_HSVI1	268-283		PHEMA_IAHRO	236-252				PHEMA_IAHFO	321-338		
PVG60_HSVI1	102-117		PHEMA_IAHSA	236-252				PHEMA_IAHK6	321-338		
PVG69_HSVI1	267-282		PHEMA_IAHSP	230-246				PHEMA_IAHK7	321-338		
PVG85_HSVI1	518-533		PHEMA_IAHSW	230-246				PHEMA_IAHLE	316-332		
PVG9_BPPH2	234-249		PHEMA_IAHTE	236-252				PHEMA_IAHLO	316-332		
PVG9_BPPZA	234-249		PHEMA_IAHTO	236-252				PHEMA_IAHMI	321-338		
PVG9_BPV1R	57-72		PHEMA_IAHUR	236-252				PHEMA_IAHNM	321-338		
PVGF_BPPHX	234-249		PHEMA_IAKIE	235-251				PHEMA_IAHNN	316-332		
PVGL2_CVBF	264-279		PHEMA_IALEN	235-251				PHEMA_IAHPR	316-332		
PVGL2_CVBL9	264-279		PHEMA_IAMAA	233-249				PHEMA_IAHRO	321-338		
PVGL2_CVBLY	264-279		PHEMA_IAMAB	236-264				PHEMA_IAHSA	321-338		
PVGL2_CVBM	264-279		PHEMA_IAMAO	237-253				PHEMA_IAHSP	316-332		
PVGL2_CVBQ	264-279		PHEMA_IAME1	237-253				PHEMA_IAHSW	316-332		
PVGL2_CVBV	264-279		PHEMA_IAME2	237-253				PHEMA_IAHTE	321-338		

PVGL2_CVPFS	442-467		PHEMA_IAME6	221-237				PHEMA_IAHTO	321-338		
PVGL2_CVPPU	440-466	504-519	PHEMA_IAMIN	85-101	231-247			PHEMA_IAHUR	321-338		
PVGL2_CVPR6	218-233		PHEMA_IANT6	237-253				PHEMA_IAJAP	317-334		
PVGL2_CVPRM	218-233		PHEMA_IAQU7	221-237				PHEMA_IAMAA	319-336		
PVGL2_IBV6	1056-1071		PHEMA_IARUD	234-250				PHEMA_IAMAB	324-341		
PVGL2_IBVB	1055-1070		PHEMA_IASE2	234-250				PHEMA_IAMAO	322-339		
PVGL2_IBVD2	1056-1071		PHEMA_IASH2	234-250				PHEMA_IAME1	322-339		
PVGL2_IBVK	1055-1070		PHEMA_IASTA	230-246				PHEMA_IAME2	322-339		
PVGL2_IBVM	1055-1070		PHEMA_IATAI	235-251				PHEMA_IAME6	306-323		
PVGLB_HSV8A	701-716		PHEMA_IATKM	234-250				PHEMA_IAMIN	316-333		
PVGLB_PRVIF	203-218		PHEMA_IATKO	233-249				PHEMA_IANT6	322-339		
PVGLC_HSV8C	476-490		PHEMA_IATKR	230-246				PHEMA_IAPIL	320-337		
PVGLC_HSVE4	444-459		PHEMA_IATKW	229-245				PHEMA_IAQU7	306-323		
PVGLC_HSVE8	427-442		PHEMA_IAUDO	237-253				PHEMA_IARUD	320-337		
PVGLC_PRVIF	446-461		PHEMA_IAUBS	235-251				PHEMA_IASE2	320-337		
PVGLD_HSV11	79-94		PHEMA_IAVI7	238-254				PHEMA_IASH2	321-338		
PVGLD_HSV2	79-94		PHEMA_IAXIA	235-251				PHEMA_IASTA	316-332		
PVGLF_BRSVA	265-280		PHEMA_IAZCO	237-253				PHEMA_IATKM	320-337		
PVGLF_BRSVC	265-280		PHEMA_IAZH2	221-237				PHEMA_IAUDO	322-339	380-397	
PVGLF_BRSVR	265-280		PHEMA_IAZH3	221-237				PHEMA_IAVI7	323-340		
PVGLF_HRSV1	265-280		PHEMA_IAZUK	237-253				PHEMA_IAZCO	322-339		
PVGLF_HRSVA	265-280		PHEMA_INBAA	116-131	295-310			PHEMA_IAZH2	306-323		
PVGLF_HRSVL	265-280		PHEMA_INBBE	123-139	303-318			PHEMA_IAZH3	306-323		
PVGLF_HRSVR	265-280		PHEMA_INBBO	116-132	293-308			PHEMA_IAZUK	322-339		
PVGLF_MUMPS	6-94		PHEMA_INBEN	123-139	301-316			PHEMA_MUMPM	101-118		
PVGLI_VZVD	278-293		PHEMA_INBFU	108-124	288-301			PHEMA_MUMPR	101-118		
PVGLM_HANTB	900-915		PHEMA_INBGL	118-135	298-311			PHEMA_MUMPS	101-118		
PVGLM_PTPV	743-758		PHEMA_INBHK	116-132	293-308			PHEMA_NDVA	93-110		
PVGLM_SEOUR	901-916		PHEMA_INBIB	108-124	288-303			PHEMA_NDVB	93-110		
PVGLM_SEOUS	900-915		PHEMA_INBID	120-136	299-314			PHEMA_NDVD	93-110		
PVGLY_LASSG	426-441		PHEMA_INBLE	123-139	302-317			PHEMA_NDVH	93-110		
PVGLY_LASSJ	427-442		PHEMA_INBMD	113-129	292-307			PHEMA_NDVI	93-110		
PVGLY_MOPEI	426-440		PHEMA_INBME	116-132	298-311			PHEMA_NDVM	93-110		
PVM3_REOVD	621-636		PHEMA_INBNA	108-124	288-303			PHEMA_NDVQ	93-110		
PVM9A_HPSGS	380-395		PHEMA_INBOR	123-139	301-316			PHEMA_NDVT6	93-110		
PVM9A_HPSV9	187-202		PHEMA_INBSI	123-139	301-316			PHEMA_NDVU	93-110		
PVM9A_WHV1	378-393		PHEMA_INBSJ	118-135	298-313			PHEMA_PHODV	36-53		
PVM9A_WHV59	383-398		PHEMA_INBUS	116-132	294-309			PHEMA_PI1HW	486-503		
PVM9A_WHV7	383-398		PHEMA_INBVI	116-132	296-311			PHEMA_PI3B	111-128		
PVM9A_WHV8	383-398		PHEMA_INBVK	123-139	303-318			PHEMA_PI3H4	111-128		
PVM9A_WHV81	383-398		PHEMA_INBYB	108-124	288-301			PHEMA_PI3HA	111-128		
PVM9A_WHVW6	234-249		PHEMA_MUMPM	133-148				PHEMA_PI3HT	111-128		
PVMT2_IAANN	25-40		PHEMA_MUMPR	133-148				PHEMA_PI3HU	111-128		
PVMT2_IABAN	25-40		PHEMA_MUMPS	133-148				PHEMA_PI3HV	111-128		
PVMT2_IAFOW	25-40		PHEMA_PI1HW	345-360				PHEMA_PI3HW	111-128		
PVMT2_IAFPR	25-40		PHEMA_PI2H	65-81				PHEMA_PI3HX	111-128		
PVMT2_IAFPW	25-40		PHEMA_PI2HT	65-81				PHEMA_PI4HA	50-67		

PVMT2_IALE1	26-40		PHEMA_PI3B	324-340				PHEMA_8V41	85-102		
PVMT2_IALE2	26-40		PHEMA_PI3H4	324-340				PHEMA_8V5	84-101		
PVMT2_IAMAN	26-40		PHEMA_PI3HA	324-340				PHEMA_8V5CM	84-101		
PVMT2_IAPUE	26-40		PHEMA_PI3HT	324-340				PHEMA_8V5CP	84-101		
PVMT2_IASIN	26-40		PHEMA_PI3HU	324-340				PHEMA_8V5LN	84-101		
PVMT2_IAUDO	26-40		PHEMA_PI3HV	324-340				PVF05_VACCC	280-297		
PVMT2_IAWIL	26-40		PHEMA_PI3HW	324-340				PVF05_VACCP	280-297		
PVMT9_MYXVL	226-241		PHEMA_PI3HX	324-340				PVF05_VACCV	281-298		
			PHEMA_RINDK	368-383				PVF09_VACCC	176-193		
			PHEMA_8V5	7-84				PVF09_VACCV	176-193		
			PHEMA_8V5CM	7-84				PVG27_H8V8A	209-226		
			PHEMA_8V5CP	7-84				PVG28_H8VI1	173-190		
			PHEMA_8V5LN	7-84				PVG39_H8VI1	648-665		
			PVENV_DHVI1	42-57				PVG43_H8VI1	109-126	621-638	
			PVENV_EAV	25-41				PVG67_H8VI1	171-188		
			PVFP2_FOWPV	88-104				PVG72_H8VI1	1252-1269		
			PVFP7_CAPVK	89-104				PVGF1_IBVB	3073-3090		
			PVFU8_VACC8	72-87				PVGL2_IBV8	1094-1111		
			PVG01_H8VEB	169-184				PVGLB_H8VE1	736-753		
			PVG01_H8VI1	209-226	317-332			PVGLB_H8VE4	675-692		
			PVG08_H8VI1	134-149				PVGLB_H8VEA	736-753		
			PVG10_H8V8A	109-124				PVGLB_H8VEB	736-753		
			PVG11_H8VI1	103-119				PVGLB_H8VEL	736-753		
			PVG12_H8VI1	270-286				PVGLB_ILTV8	597-614		
			PVG1_8PV1R	76-92				PVGLB_ILTV8	607-624		
			PVG29_H8VI1	20-36				PVGLB_ILTVT	607-624		
			PVG88_8POX2	22-37				PVGLC_PRVIF	180-197		
			PVG30_H8V8A	108-123				PVGLE_VZVD	469-486		
			PVG37_H8VI1	284-299				PVGLF_8V5	401-418		
			PVG41_H8VI1	244-260				PVGLH_HCMVA	365-382		
			PVG46_H8VI1	1244-1260				PVGLH_HCMVT	364-381		
			PVG55_H8VI1	22-37	143-158			PVGLH_H8V11	245-262	603-620	
			PVG50_H8VI1	266-283				PVGLH_H8V1E	245-262	603-620	
			PVG58_H8VI1	101-117				PVGLI_H8V11	43-60		
			PVG66_H8V9A	130-146	330-346			PVGLM_BUNL7	81-98		
			PVG69_H8VI1	267-282				PVGLM_BUNSH	81-98		
			PVG85_H8VI1	362-378	618-633			PVGLM_PUUMH	712-729		
			PVG71_H8V8A	89-105				PVGLM_PUUMS	712-729		
			PVG9_8PPH2	234-249				PVGLM_RVFV	344-361		
			PVG9_8PPZA	234-249				PVGLM_RVFVZ	344-361		
			PVG9_8PV1R	57-72				PVGLY_LA98G	12-94		
			PVGF1_IBVB	2210-2226				PVGLY_LA98J	12-94		
			PVGL2_CVBF	123-139	174-190	264-279		PVGLY_LYCVA	12-94		
			PVGL2_CVBL9	123-139	174-190	264-279		PVGLY_LYCVW	12-94		
			PVGL2_CVBLY	123-139	174-190	264-279		PVGLY_MOPEI	12-94		
			PVGL2_CVBM	123-139	174-190	264-279		PVM1_REOVD	280-297		
			PVGL2_CVBQ	31-47	123-139	174-190	264-279	PVM1_REOVL	280-297		

			PVGL2_CVBV	123-139	174-190	264-279		PVMAT_CDVO	146-165		
			PVGL2_CVM4	95-111	1267-1283			PVMAT_MEASI	87-104		
			PVGL2_CVMA5	95-111	1215-1231			PVMP_CAMVC	147-164		
			PVGL2_CVMJH	95-111	1126-1142			PVMP_CAMVD	147-164		
			PVGL2_CVPF8	442-457	800-816	1274-1290		PVMP_CAMVE	147-164		
			PVGL2_CVPFU	440-455	504-519	798-814	1272-1288	PVMP_CAMVN	147-164		
			PVGL2_CVPR8	216-233	576-592	1050-1066		PVMP_CAMV9	147-164		
			PVGL2_CVPRM	216-233	576-592	1050-1066		PVMP_CAMVW	147-164		
			PVGL2_FIPV	803-819	1277-1293			PVM9A_HPBV0	11-94		
			PVGL2_IBV6	1056-1071				PVM9A_HPBV2	185-202		
			PVGL2_IBVB	1056-1070				PVM9A_HPBV4	185-202		
			PVGL2_IBVD2	1056-1071				PVM9A_HPBVA	174-191		
			PVGL2_IBVK	1055-1070				PVM9A_HPBVD	11-94		
			PVGL2_IBVM	1055-1070				PVM9A_HPBVJ	174-191		
			PVGLB_H9V9A	701-716				PVM9A_HPBVL	174-191		
			PVGLB_PRVIF	203-218				PVM9A_HPBVN	11-94		
			PVGLB_VZVD	522-538				PVM9A_HPBVO	174-191		
			PVGLC_H9VBC	476-490				PVM9A_HPBVP	185-202		
			PVGLC_H9VE4	444-459				PVM9A_HPBVR	185-202		
			PVGLC_H9VE8	427-442				PVM9A_HPBV8	11-94		
			PVGLC_PRVIF	446-461				PVM9A_HPBVW	174-191		
			PVGLC_VZVD	160-166				PVM9A_HPBVY	174-191		
			PVGLC_VZV8	160-166				PVM9A_HPBVZ	174-191		
			PVGLD_H9V11	79-94				PVMT2_IAANN	25-42		
			PVGLD_H9V2	79-94				PVMT2_IABAN	25-42		
			PVGLE_PRVRI	3-94				PVMT2_IAFOW	25-42		
			PVGLF_BR9VA	205-221	265-280			PVMT2_IAFPR	25-42		
			PVGLF_BR9VC	205-221	265-280			PVMT2_IAFPW	25-42		
			PVGLF_BR9VR	205-221	265-280			PVMT2_IALE1	25-42		
			PVGLF_CDVO	398-414				PVMT2_IALE2	25-42		
			PVGLF_HR9V1	205-221	265-280			PVMT2_IAMAN	25-42		
			PVGLF_HR9VA	205-221	265-280			PVMT2_IAPUE	25-42		
			PVGLF_HR9VL	205-221	265-280			PVMT2_IASIN	25-42		
			PVGLF_HR9VR	205-221	265-280			PVMT2_IAUDO	25-42		
			PVGLF_MEA8E	286-302				PVMT2_IAWIL	25-42		
			PVGLF_MEA8I	289-305							
			PVGLF_MEA9Y	286-302							
			PVGLF_MUMPM	276-292							
			PVGLF_MUMPR	276-292							
			PVGLF_MUMPS	6-94	276-292						
			PVGLF_NDVA	273-289							
			PVGLF_NDVB	273-289							
			PVGLF_NDVM	273-289							
			PVGLF_NDVT	273-289							
			PVGLF_NDVTG	273-289							
			PVGLF_NDVU	273-289							
			PVGLF_PHODV	269-286	367-383						

			PVGLP_RINDK	282-298							
			PVGLP_RINDL	282-298							
			PVGLP_TRTV	176-191							
			PVGLI_VZVD	278-293							
			PVGLM_HANTB	355-371	900-915						
			PVGLM_HANTH	499-515							
			PVGLM_HANTL	499-515							
			PVGLM_HANTV	499-515							
			PVGLM_PTPV	743-758							
			PVGLM_PUUMH	509-525							
			PVGLM_PUUM9	509-525							
			PVGLM_SEQUR	355-371	901-916						
			PVGLM_SEQU9	355-371	900-916						
			PVGLM_UUK	826-842							
			PVGLP_SEV	869-885							
			PVGLY_LASSG	12-94	426-441						
			PVGLY_LASSJ	12-94	427-442						
			PVGLY_LYCVA	12-94							
			PVGLY_LYCVW	12-94							
			PVGLY_MOPEI	12-94	426-440						
			PVGLY_PIARV	12-94							
			PVGNM_CPMV	1021-1037							
			PVM3_REOVD	521-536							
			PVMAT_MUMPS	191-207							
			PVMAT_NDVA	135-151							
			PVMAT_NDVB	135-151							
			PVMAT_PI2HT	189-205							
			PVMAT_SV41	189-205							
			PVMAT_SV5	98-114	132-148						
			PVMP_CAMVC	118-134							
			PVMP_CAMVD	118-134							
			PVMP_CAMVE	118-134							
			PVMP_CAMVN	118-134							
			PVMP_CAMVS	118-134							
			PVMP_CAMVW	118-134							
			PVMP_FMVD	115-131							
			PVM9A_HPBQ9	380-395							
			PVM9A_HPBV9	187-202							
			PVM9A_WHV1	378-393							
			PVM9A_WHV59	383-398							
			PVM9A_WHV7	383-398							
			PVM9A_WHV8	383-398							
			PVM9A_WHV81	383-398							
			PVM9A_WHVW8	234-249							
			PVMT2_IAANN	25-40							
			PVMT2_IABAN	25-40							
			PVMT2_IAPOW	25-40							

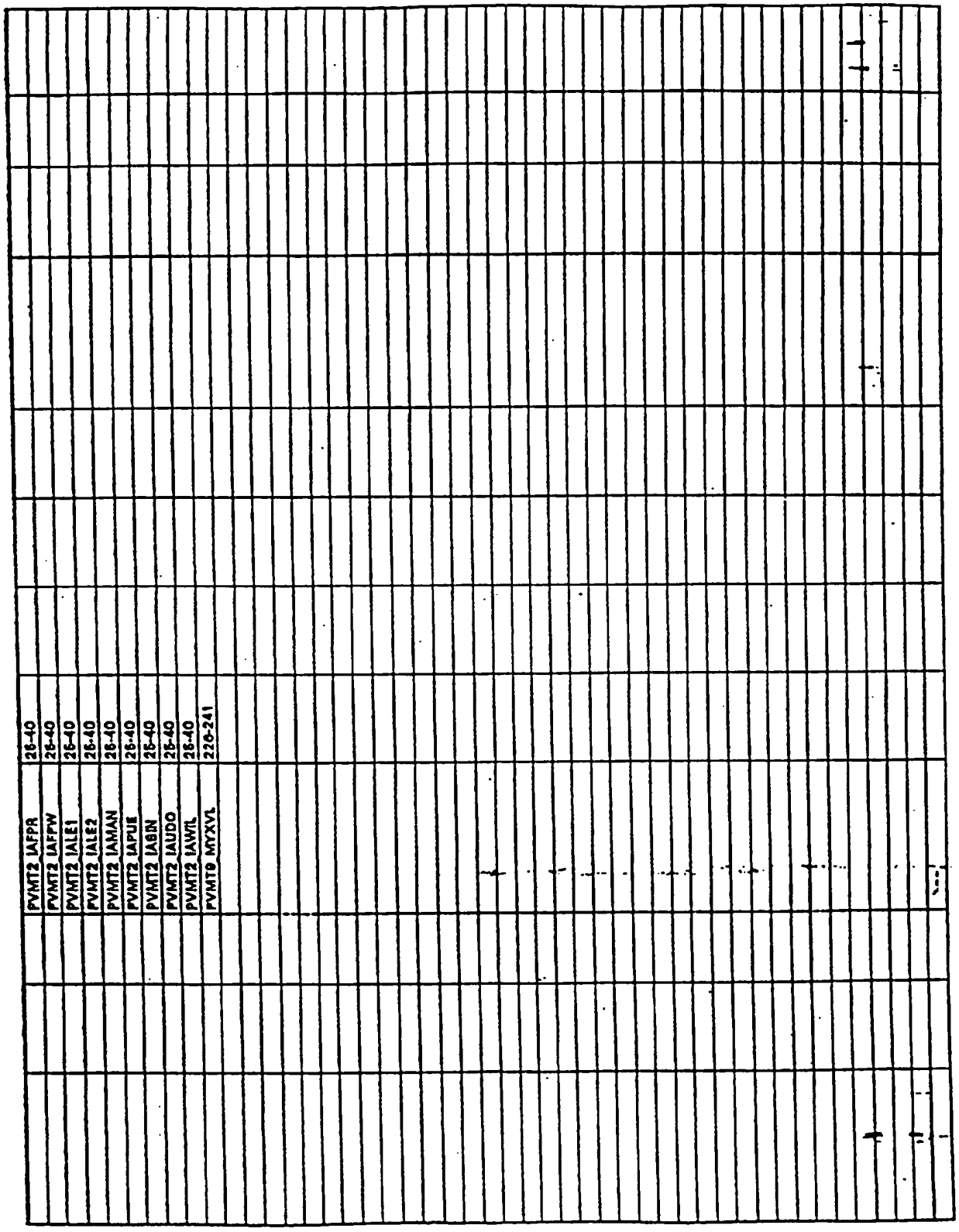

PVMT2_IAFPR 26-40
PVMT2_IAFPW 26-40
PVMT2_IALE1 26-40
PVMT2_IALE2 26-40
PVMT2_IAMAN 26-40
PVMT2_IAPUE 26-40
PVMT2_IABIN 26-40
PVMT2_IAUDO 26-40
PVMT2_IAWIL 26-40
PVMT0_MYXVL 226-241

TABLE XI

Search Results Summary for P3CTLZIP, P4CTLZIP, P5CTLZIP, and P6CTLZIP Motifs

P3CTLZIP			P4CTLZIP			P5CTLZIP			P6CTLZIP			
LIBRARY FILE			LIBRARY FILE			LIBRARY FILE			LIBRARY FILE			
PENV_BIV27	147-166		PENV1_FRSFV	380-399		PENV1_FRSFV	380-400		PENV_BIV08	47-68	626-646	
PENV_CAEVC	810-828		PENV_AVI6U	98-117		PENV2_FRSFV	380-400		PENV_BIV27	47-68	147-168	564-575
PENV_CAEVG	808-828		PENV_BIV27	147-166		PENV_BAEVM	170-190		PENV_FENV1	226-246	630-651	
PENV_HV2B6	750-768		PENV_HV1ZH	123-142		PENV_FIVPE	781-801		PENV_FLVC6	624-645		
PENV_HV2D1	741-759		PENV_HV2D2	9-29		PENV_FIV9D	779-799		PENV_FLVQL	447-466	605-626	
PENV_HV2Q1	741-759		PENV_HV2S8	778-797		PENV_FIVT2	780-800		PENV_FLVL8	467-486	625-646	
PENV_HV2NZ	742-760		PENV_J9RV	541-560		PENV_FLVQL	9-29		PENV_FLV9A	444-465	802-823	
PENV_HV2RO	751-769		PENV_RSVP	533-552		PENV_FOAMV	255-275	924-944	PENV_FOAMV	153-174	957-978	
PENV_HV2S8	743-761		PHEMA_VACCC	173-192		PENV_F9VQA	9-29		PENV_F9VQA	467-486	626-646	
PENV_HV2ST	745-763		PHEMA_VACCI	173-192		PENV_HV1C4	420-440		PENV_F8VQB	447-466	605-626	
PENV_J9RV	376-394		PHEMA_VACCT	173-192		PENV_HV2CA	750-770		PENV_F8V9M	460-471	609-629	
PHEMA_PI2H	116-136		PHEMA_VACCV	173-192		PENV_MLVF5	400-420		PENV_F6V8T	467-488		
PHEMA_PI2HT	116-136		PVENV_BEV	62-81		PENV_MMTVB	643-663		PENV_GALV	52-73	618-640	
PHEMA_SV41	55-73		PVENV_MCV1	61-80		PENV_MMTVG	643-663		PENV_HV28E	760-771		
PVENV_THOQV	473-491		PVENV_MCV2	61-80		PENV_OMVV9	76-96		PENV_HV2Q1	741-762		
PVG18_BPP22	83-101		PVFU9_ORFNZ	28-48		PENV_RSVP	42-62		PENV_HV2NZ	742-763		
PVG24_BPT4	115-133		PVG01_H9VE8	169-188		PENV_9FV1	924-944		PENV_HV2RO	751-772		
PVG38_H6V8A	344-362		PVG01_VACCC	376-395		PENV_9FV3L	921-941		PENV_HV2ST	746-766		
PVG40_H9VI1	14-32		PVG01_VACCV	315-334		PENV_9IVM1	766-786		PENV_MCFF	600-621		
PVG50_H6V8A	5-24		PVG01_VARV	376-395		PENV_6IVMK	765-785		PENV_MCFF3	601-622		
PVG61_BPT4	63-81		PVG08_BPT4	627-646		PENV_8IVML	764-784		PENV_MLVAV	630-651		
PVG61_H6VI1	84-102		PVG10_H8VI1	35-54		PENV_6IV84	769-789		PENV_MLVCB	626-646		
PVG66_H9VI1	155-173		PVG11_H9VI1	103-122	150-169	PENV_9IV8P	773-793		PENV_MLVF6	639-660		
PVGF1_IBV8	2788-2806	3374-3392	PVG1_BPPH2	31-50		PHEMA_CDVO	493-513		PENV_MLVFF	639-660		
PVGL2_CVH22	1053-1071		PVG1_BPV1R	659-678		PHEMA_CV8LY	391-411		PENV_MLVFP	639-660		
PVGL2_IBV6	1056-1074		PVG20_BPT4	231-250		PHEMA_CV8M	391-411		PENV_MLVHO	626-647		
PVGL2_IBVB	1056-1073		PVG32_VZVD	90-109		PHEMA_CV8Q	391-411		PENV_MLVKI	167-188		
PVGL2_IBVD2	1056-1074		PVG36_BPK3	132-151		PHEMA_CVHOC	391-411		PENV_MLVMO	629-650		
PVGL2_IBVK	1056-1073		PVG37_BPT2	19-38	629-648	PHEMA_CVMA5	402-422		PENV_MLVRD	624-645		
PVGL2_IBVM	1056-1073		PVG37_BPT4	19-38	626-644	PHEMA_IACKQ	81-101		PENV_MLVRK	624-645		
PVGL8_H9V81	660-678	689-707	PVG39_H9VI1	1038-1057		PHEMA_IADMA	81-101		PENV_M9VF8	170-191		
PVGL8_H6V8C	692-710		PVG41_H9VI1	62-81		PHEMA_MUMPM	397-417		PENV_RMCFV	603-624		
PVGL8_H9V9A	684-702		PVG43_BPPF3	380-399		PHEMA_MUMPR	397-417		PENV_9FV1	957-978		
PVGL8_ILTV6	740-758		PVG46_BPPF1	337-356		PHEMA_MUMPS	397-417		PENV_6FV3L	157-178	954-975	
PVGL8_ILTV8	760-788		PVG59_H9VI1	142-161		PHEMA_PHODV	493-513		PENV_6IVA1	437-458		
PVGL8_ILTVT	760-788		PVG61_H6VI1	117-136		PHEMA_PI1HW	322-342		PENV_6IVAQ	442-463		
PVGLC_VZVD	431-449		PVG67_H9VI1	318-337	1072-1091	PHEMA_PI2H	13-33		PENV_8IVAI	421-442		
PVGLC_VZV9	431-449		PVGF1_IBV8	1687-1606	2108-2127	PHEMA_PI2HT	13-33		PENV_8IVAT	436-456		
PVGLF_PI3H4	2-24		PVGL2_CV8F	991-1010		PHEMA_RINDL	497-517		PENV_8M9AV	42-63		
PVGLH_H6V6G	314-332		PVGL2_CV8L8	991-1010		PHEMA_SENDS	322-342		PHEMA_CVMA5	402-423		
PVGLH_H6VE4	814-832		PVGL2_CV8LY	991-1010		PHEMA_SENDF	322-342		PHEMA_IADE1	266-287		
PVGLH_H6VE8	807-825		PVGL2_CV8M	991-1010		PHEMA_SENDH	322-342		PHEMA_MUMPM	225-246		
PVGLI_H9V11	5-24		PVGL2_CV8Q	991-1010		PHEMA_SENDJ	322-342		PHEMA_MUMPR	225-246		
PVGNM_BPMV	678-696		PVGL2_CV8V	991-1010		PHEMA_SENDZ	322-342		PHEMA_MUMPS	225-246		
PVM01_VACCC	134-152	177-195	PVGL2_CVH22	788-787	1115-1134	PVENV_LELV	27-47	146-166	PHEMA_PHODV	213-234		

PVM01_VACCV	83-101	126-144	PVGL2_CVM4	999-1018		PVENV_THOOV	358-378		PHEMA_PI2H	13-34		
PVM1_REOVD	227-246		PVGL2_CVMA6	947-966		PVG01_VACCC	298-318		PHEMA_PI2HT	13-34		
PVM1_REOVL	227-246		PVGL2_CVMJH	868-877		PVG01_VACCV	237-257		PHEMA_SVB	7-28	379-400	
PVMAT_HR6VA	44-62		PVGL2_CVPF8	64-83	1030-1067	PVG01_VARV	298-318		PHEMA_SV5CM	7-28	379-400	
PVMAT_NDVA	190-208		PVGL2_CVPPU	64-83	1030-1055	PVG06_VACCC	31-51		PHEMA_SV5CP	7-28	379-400	
PVMAT_NDVB	190-208		PVGL2_CVPR8	814-833		PVG06_VARV	31-51		PHEMA_SV5LN	7-28	379-400	
PVMP_CAMVC	183-201		PVGL2_CVPRM	814-833		PVG09_BPPF1	25-45		PVG01_H5VE8	189-190		
PVMP_CAMVD	183-201		PVGL2_FIPV	1041-1060		PVG12_H5VI1	161-171		PVG01_H6VI1	589-610		
PVMP_CAMVE	183-201		PVGL2_IBV6	606-607	771-700	PVG22_H5VI1	300-320		PVG23_H5VI1	314-335		
PVMP_CAMVN	183-201		PVGL2_IBVB	587-606	770-789	PVG39_H5VI1	640-668	970-990	PVG37_BPOX2	65-88		
PVMP_CAMVS	183-201		PVGL2_IBVD2	588-607	771-700	PVG51_H5VI1	29-49		PVG43_H5VI1	167-178		
PVMP_CAMVW	183-201		PVGL2_IBVK	587-606	770-789	PVG63_H5VI1	338-358		PVG55_H5VI1	288-309		
PVMP_FMVD	180-198		PVGL2_IBVM	587-606	770-789	PVG65_H5VI1	117-137		PVG66_H5V8A	85-106		
			PVGL8_HCMVA	706-725		PVG74_H5V5A	124-144		PVG56_H6VI1	1165-1176		
			PVGL8_HCMVT	707-726		PVGL2_IBV6	328-348		PVG58_H5V8A	288-287		
			PVGL8_H5V6U	117-136		PVGL2_IBVB	327-347		PVG80_H5VI1	30-51		
			PVGL8_ILTV6	256-275		PVGL2_IBVD2	328-348		PVG83_H5VI1	238-259		
			PVGL8_ILTV5	266-285		PVGL2_IBVD3	328-348		PVGF1_IBV8	1656-1677		
			PVGL8_ILTVT	266-285		PVGL2_IBVK	327-347		PVGH3_HCMVA	167-178		
			PVGLC_H6V11	3-24	467-486	PVGL2_IBVM	327-347	378-388	PVGL2_CVBF	1259-1280		
			PVGLC_H5V1K	3-24	467-486	PVGL2_IBVU2	310-330		PVGL2_CVBL6	1259-1280		
			PVGLC_H5VBC	476-494		PVGL8_EBV	732-752		PVGL2_CVBLY	1259-1280		
			PVGLG_CHAV	436-456		PVGLB_HCMVA	750-770		PVGL2_CVBM	1259-1280		
			PVGLG_RABVH	372-391		PVGLB_HCMVT	751-771		PVGL2_CVBQ	1259-1280		
			PVGLI_H5VEB	44-63		PVGLB_H5V23	79-99		PVGL2_CVBV	1259-1280		
			PVGLI_VZVD	278-297		PVGLB_H6V2H	79-99		PVGL2_CVM4	1317-1338		
			PVGLM_BUNGE	117-136		PVGLB_H5V29	66-86		PVGL2_CVMA5	1265-1286		
			PVGLM_PHV	152-171		PVGLB_H6V6U	72-92		PVGL2_CVMJH	1176-1197		
			PVGLM_PTPV	997-1016		PVGLB_H5VB2	279-299		PVGLB_H6V11	83-104		
			PVGLM_PUUMH	155-174		PVGLB_H6V8A	63-83		PVGLB_H6V1F	82-103		
			PVGLM_PUUMS	155-174		PVGLB_MCMV8	738-758		PVGLB_H6V1K	82-103		
			PVGLM_RVFV	830-849		PVGLF_PI3H4	283-303		PVGLB_H6V1P	83-104		
			PVGLM_RVFVZ	830-849		PVGLG_RABVE	454-474		PVGLB_MCMV9	135-150		
			PVGLM_UUK	665-674		PVGLG_RABVH	454-474		PVGLC_PRVIF	448-467		
			PVGLY_LYCVW	89-108		PVGLG_RABVP	454-474		PVGLF_CDVO	338-357		
			PVGNB_CPMV	1185-1104		PVGLG_RABV8	454-474		PVGLF_M6ABE	224-245		
			PVM3_REOVD	621-640		PVGLG_RABVT	454-474		PVGLF_MEA8I	227-248		
			PVME1_CVBM	171-190		PVGLH_MCMV8	670-690		PVGLF_M6ABY	224-245		
			PVME1_CVH22	139-156		PVGLM_BUNL7	1325-1345		PVGLF_MUMPM	446-467		
			PVME1_CVPF8	174-193		PVGLM_BUN8H	1325-1345		PVGLF_MUMPR	446-467		
			PVME1_CVPPU	174-193		PVGLM_BUNYW	998-1018		PVGLF_MUMP8	446-467		
			PVME1_CVPRM	174-193		PVGLM_HANTB	999-1019		PVGLF_PHODV	305-326		
			PVME1_CVTKE	171-190		PVGLM_HANTH	1000-1020		PVGLP_PI1HC	458-477		
						PVGLM_HANTL	1001-1021		PVGLF_PI2H	450-471		
						PVGLM_HANTV	1001-1021		PVGLF_PI2HG	450-471		
						PVGLM_RVFV2	1168-1178		PVGLF_PI2HT	450-471		
						PVGLM_SEOUR	1000-1020		PVGLP_PI3B	405-426	453-474	

						PVGLM_SEOUS	999-1019		PVGLF_PI3H4	453-474	
						PVGLM_UUK	925-945		PVGLF_RINDK	220-241	
						PVGLY_LYCVA	12-32		PVGLF_RINDL	220-241	
						PVGLY_LYCVW	12-32		PVGLF_SENDS	460-481	
						PVGLY_PIARV	12-32		PVGLF_SENDF	460-481	
						PVGNB_CPMV	141-161		PVGLF_SENDH	460-481	
						PVMAT_MUMPS	310-330		PVGLF_SENDJ	460-481	
						PVMAT_NDVA	309-329		PVGLF_SENDZ	460-481	
						PVMAT_NDVB	309-329		PVGLF_SV41	453-474	
						PVMAT_PI2HT	308-328		PVGLF_SV5	446-467	
						PVMAT_PI4HA	312-332		PVGLH_HCMVA	691-712	
						PVMAT_PI4HB	312-332		PVGLH_HCMVT	690-711	
						PVMAT_SV41	308-328		PVGLH_HSVE4	304-325	
						PVMAT_SV5	308-328		PVGLH_HSVEB	297-318	
						PVME1_IBV6	74-94		PVGLH_HSV6A	658-679	
						PVME1_IBVB	74-94		PVGLI_HSV2	2-23	
						PVME1_IBVB2	74-94		PVGLI_HSV23	2-23	
						PVME1_IBVK	74-94		PVGLM_BUNGE	197-218	
						PVMSA_HPBDB	201-221		PVGLM_BUNL7	190-211	
						PVMSA_HPBGS	209-229		PVGLM_BUNSH	190-211	
						PVMSA_HPBHE	293-313		PVGLM_BUNYW	193-214	
						PVMSA_WHV1	207-227		PVGLY_LASSG	237-258	
						PVMSA_WHV59	212-232		PVGLY_LASSJ	238-259	
						PVMSA_WHV7	212-232		PVGP8_EBV	67-88	
						PVMSA_WHV8	212-232		PVM01_VACCC	281-302	
						PVMSA_WHV8I	212-232		PVM01_VACCV	230-251	
						PVMSA_WHVW8	63-83		PVMAT_HRSVA	169-190	
									PVMAT_RINDK	200-221	239-260
									PVMAT_TRTV	122-143	
									PVME1_CVHOC	64-85	
									PVMSA_HPBDB	201-222	
									PVMSA_HPBVO	70-91	
									PVMSA_HPBV2	244-265	
									PVMSA_HPBV4	244-265	
									PVMSA_HPBV9	244-265	
									PVMSA_HPBVA	233-254	
									PVMSA_HPBVD	70-91	
									PVMSA_HPBVI	233-254	
									PVMSA_HPBVJ	233-254	
									PVMSA_HPBVL	233-254	
									PVMSA_HPBVN	70-91	
									PVMSA_HPBVO	233-254	
									PVMSA_HPBVP	244-265	
									PVMSA_HPBVR	244-265	
									PVMSA_HPBVS	70-91	
									PVMSA_HPBVW	233-254	
									PVMSA_HPBVY	233-254	

BAD ORIGINAL

PVM3A_HPBV2	233-264
PVMT2_IAANN	26-46
PVMT2_IABAN	26-46
PVMT2_IAFOW	26-46
PVMT2_IAFPR	26-46
PVMT2_IAFPW	26-46
PVMT2_IALE1	26-46
PVMT2_IALE2	26-46
PVMT2_IAMAN	26-46
PVMT2_IAPUE	26-46
PVMT2_IABIN	26-46
PVMT2_IAUDO	26-46
PVMT2_IAWIL	26-46

TABLE XII

Search Results Summary for P7CTLZIP, P8CTLZIP, and P9CTLZIP Motifs

P7CTLZIP			P8CTLZIP			P8CTLZIP					
LIBRARY FILE			LIBRARY FILE			LIBRARY FILE					
PENV_8AEVM	202-224		PENV1_FR8FV	380-403		PENV_8LVAP	303-327				
PENV_HV1B1	498-520		PENV2_FR8FV	380-403		PENV_8LVAU	303-327				
PENV_HV1B8	493-515		PENV_8IV08	178-201		PENV_8LVAV	303-327				
PENV_HV1BN	494-516		PENV_8IV27	207-230		PENV_8LVB2	303-327				
PENV_HV1BR	503-525		PENV_FOAMV	804-867		PENV_8LVBG	303-327				
PENV_HV1EL	495-517		PENV_HV123	176-198		PENV_8LVJ	303-327				
PENV_HV1H2	498-520		PENV_HV2BE	3-26	781-804	PENV_FIVPE	781-805				
PENV_HV1H3	498-520		PENV_HV2CA	750-773		PENV_FIV8D	779-803				
PENV_HV1J3	510-532		PENV_HV2D1	3-26	772-795	PENV_FIVT2	780-804				
PENV_HV1JR	490-512		PENV_HV2G1	772-795		PHEMA_CVBLY	391-415				
PENV_HV1K8	504-526		PENV_HV2NZ	777-800		PHEMA_CVBM	391-415				
PENV_HV1MA	500-522		PENV_J8RV	541-564		PHEMA_CVBQ	391-415				
PENV_HV1MF	498-518		PENV_8FV1	864-887		PHEMA_CVHOC	391-415				
PENV_HV1ND	488-510		PENV_8FV3L	861-884		PHEMA_INCCA	442-466				
PENV_HV1PV	498-520		PENV_8IVM1	803-826		PHEMA_INCEN	430-454				
PENV_HV1S1	489-511		PENV_8IVMK	802-825		PHEMA_INCGL	430-454				
PENV_HV1Z2	123-146	496-517	PENV_8IVML	801-824		PHEMA_INCHY	429-453				
PENV_HV1Z6	497-519		PENV_8IVB4	808-829		PHEMA_INCJH	443-467				
PENV_HV1Z8	505-527		PENV_8IV8P	810-833		PHEMA_INCKY	429-453				
PENV_HV1ZH	498-520		PHEMA_CDVO	200-223		PHEMA_INCMI	429-453				
PENV_J8RV	378-398		PHEMA_PI2H	65-88		PHEMA_INCNA	429-453				
PENV_MPMV	213-235		PHEMA_PI2HT	65-88		PHEMA_INCP1	430-454				
PENV_8RV1	213-235		PVF11_VACCC	181-184		PHEMA_INCP2	430-454				
PHEMA_1AAIC	37-59		PVF15_VACCC	26-48		PHEMA_INCP3	430-454				
PHEMA_1ABAN	21-43		PVF15_VACCP	3-26		PHEMA_INCTA	430-454				
PHEMA_1ADA3	37-59		PVG1L_AMEPV	313-336		PHEMA_INCYA	430-454				
PHEMA_1ADH2	21-43		PVG28_H8VI1	491-514		PHEMA_MUMPM	101-125				
PHEMA_1ADH3	21-43		PVG43_H8VI1	322-345		PHEMA_MUMPR	101-125				
PHEMA_1ADH4	21-43		PVG52_H8VI1	229-252		PHEMA_MUMPS	101-125				
PHEMA_1ADH5	21-43		PVG67_H8VI1	722-745		PHEMA_PI1HW	29-53				
PHEMA_1ADH6	21-43		PVGL2_CVBF	10-33		PVENV_8EV	62-86				
PHEMA_1ADH7	21-43		PVGL2_CVBL9	651-674		PVF05_VACCC	280-304				
PHEMA_1ADM2	37-59		PVGL2_CVBLY	10-33		PVF05_VACCP	280-304				
PHEMA_1ADMA	28-50		PVGL2_CVM4	1267-1290		PVF05_VACCV	281-305				
PHEMA_1ADU3	37-59		PVGL2_CVMA5	1215-1238		PVF09_VACCC	176-200				
PHEMA_1AEN6	21-43		PVGL2_CVMJH	1128-1149		PVF09_VACCV	176-200				
PHEMA_1AEN7	37-59		PVGL2_CVPF8	1274-1297		PVG01_VZVD	58-82				
PHEMA_1AMA0	37-59		PVGL2_CVPPU	1272-1295		PVG10_H8V8A	356-379				
PHEMA_1AME1	37-59		PVGL2_CVPR8	1050-1073		PVG12_H8V8A	68-92				
PHEMA_1AME2	37-59		PVGL2_CVPRM	1050-1073		PVG19_H8VI1	88-112				
PHEMA_1AME6	21-43		PVGL2_FIPV	1277-1300		PVG28_H8VI1	173-197				
PHEMA_1ANT6	37-59		PVGL2_I8V6	196-218		PVG43_H8VI1	109-133				
PHEMA_1AQU7	21-43		PVGL2_I8VB	195-218		PVG67_H8VI1	108-132	1005-1029			
PHEMA_1ATKM	33-55		PVGL2_I8VD2	196-219		PVG72_H8VI1	720-744				
PHEMA_1AUD0	37-59		PVGL2_I8VD3	196-219		PVGF1_I8VB	3001-3025				

PHEMA_IAVI7	38-60		PVGL2_IBVK	195-218		PVGLB_HSVMD	589-613				
PHEMA_IAX31	37-59		PVGL2_IBVM	195-218		PVGLB_ILTV6	597-621				
PHEMA_IAZCO	37-59		PVGL2_IBVU1	178-201		PVGLB_ILTVB	607-631				
PHEMA_IAZH2	21-43		PVGL2_IBVU2	178-201		PVGLB_ILTVT	607-631				
PHEMA_IAZH3	21-43		PVGL2_IBVU3	178-201		PVGLE_HSV11	413-437				
PHEMA_IAZUK	37-59		PVGLB_HCMVA	535-558		PVGLE_VZVD	469-493				
PHEMA_PHODV	36-58		PVGLB_HCMVT	536-559		PVGLF_SV5	401-426				
PHEMA_PI2H	65-87		PVGLB_HSVBA	483-506		PVGLH_HCMVA	674-598				
PHEMA_PI2HT	65-87		PVGLB_MCMVS	566-589		PVGLH_HCMVT	573-597				
PVFP7_CAPVK	89-111		PVGLC_HSV11	467-490		PVGLH_HSV11	443-467	803-827			
PVFU8_VACC8	72-94		PVGLC_HSV1K	467-490		PVGLH_HSV1E	443-467	803-827			
PVG01_HSVI1	317-339		PVGLC_HSV2	435-458		PVGLM_BUNL7	31-55				
PVG03_VACCC	50-72		PVGLC_HSV23	436-459		PVGLM_BUNSH	31-55				
PVG03_VARV	50-72		PVGLM_BUNL7	1387-1410		PVGLM_HANTH	694-718				
PVG04_VACCC	11-33		PVGLM_BUNSH	1387-1410		PVGLM_RVFV	344-368				
PVG04_VARV	11-33		PVGLM_UUK	966-989		PVGLM_RVFVZ	344-368				
PVG18_HSVI1	88-110		PVGLY_JUNIN	12-36		PVGLM_UUK	561-585				
PVG28_HSVI1	173-195		PVGLY_LASSG	12-35		PVGNM_CPMV	311-335				
PVG29_HSVI1	20-42		PVGLY_LASSJ	12-35		PVGP2_EBV	657-681				
PVG46_HSVI1	134-156		PVGLY_LYCVA	12-35		PVGP3_EBV	854-878				
PVG48_HSVSA	71-93		PVGLY_LYCVW	12-35		PVM1_REOVD	280-304				
PVG58_HSVSA	266-288		PVGLY_MOPEI	12-35		PVM1_REOVL	280-304				
PVG59_HSVI1	267-289		PVGLY_TACV	12-35		PVM21_REOVD	168-192				
PVG5_SFV4	42-64		PVGLY_TACV5	12-35		PVM22_REOVD	168-192				
PVG60_HSVI1	53-75		PVGLY_TACV7	12-35		PVM2_REOVJ	168-192				
PVG65_HSVI1	1347-1369		PVGLY_TACVT	12-35		PVM2_REOVL	168-192				
PVG8_SFV1R	60-82		PVGNM_CPMV	741-764		PVMAT_MEASI	87-111				
PVGL2_IBV6	1056-1078		PVM1_REOVD	324-347	454-477	PVMAT_SSPVB	314-338				
PVGL2_IBVB	1055-1077		PVM1_REOVL	454-477		PVME1_CVBM	137-161				
PVGL2_IBVD2	1056-1078		PVMAT_MUMPS	227-250		PVME1_CVHOC	137-161				
PVGL2_IBVK	1055-1077		PVMSA_HPBDB	269-292		PVME1_CVTKE	137-161				
PVGL2_IBVM	1055-1077		PVMSA_HPBDC	268-291		PVME1_IBV6	74-98				
PVGLB_HSV6U	117-139		PVMSA_HPBDU	231-254		PVME1_IBVB	74-98				
PVGLB_HSVB2	745-767		PVMSA_HPBDW	269-292		PVME1_IBVB2	74-98				
PVGLC_HSVMB	399-421		PVMSA_HPBHE	236-259		PVME1_IBVK	74-98				
PVGLC_HSVMG	398-420					PVMSA_HPBGS	271-295				
PVGLC_HSVMM	399-421					PVMSA_WHV1	200-293				
PVGLF_BRSVA	265-287	482-504				PVMSA_WHV59	274-298				
PVGLF_BRSVC	484-506					PVMSA_WHV7	274-298				
PVGLF_BRSVR	484-506					PVMSA_WHV8	274-298				
PVGLF_HRSV1	484-506					PVMSA_WHV8I	274-298				
PVGLF_HRSVA	484-506					PVMSA_WHVW8	126-149				
PVGLF_HRSVL	484-506										
PVGLF_HRSVR	484-506										
PVGLF_TRTV	462-474										
PVGLG_BHV	77-99										
PVGLG_VHSVO	406-428										

BAD ORIGINAL

PVGLH_H8VE4	814-838										
PVGLH_H8VEB	807-828										
PVGLI_HCMVA	158-180										
PVGLM_FTPV	743-765										
PVGLP_BEV	430-452	1546-1568									
PVGLY_LA88Q	426-448										
PVGLY_LA88J	427-449										
PVGLY_MOPEI	426-447										
PVGP2_EBV	857-879										
PVGP3_EBV	854-876										
PVM1_REOVD	414-436										
PVM1_REOVL	414-436										
PVM3_REOVD	304-326										
PVMAT_PI1HC	195-217										
PVMAT_PI2HT	132-154										
PVMAT_SENDF	195-217										
PVMAT_SENDH	195-217										
PVMAT_SENDZ	195-217										
PVMAT_SV41	132-154										
PVMEM_EBV	131-153										
PVMP_CERV	293-315										

TABLE XIII

SEARCH RESULTS SUMMARY FOR P12LZIPC MOTIF

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)								
ELEMAGE	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
P1HK_TRYSY	POTENTIAL 194 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	360-378	440-456	600-619	641-661	1011-1030	1299-1315	1385-1409	
P1BIIS_VACCC	18ETA-11SD	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-56	397-411						
P1BIIS_VACCV	18ETA-11SD	VACCINIA VIRUS (STRAIN WR)	41-56	397-411						
P1BIIS_VARV	18ETA-11SD	VARIOLA VIRUS	41-56	397-411						
P4T2I_FOWPV	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438[NEUROP])	41-56							
P4T1I_VACCV	94 KD A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	47-69							
P4T1I_VARV	81 KD A-TYPE INCLUSION PROTEIN	VARIOLA VIRUS	187-410							
P4T1I_HSV11	UL46	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	188-411							
P4T1I_HSV1F	UL46	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	279-305							
P4T1I_HSVEB	ALPHA TRANS-INDUCING FACTOR 82 KD PROTEIN	EQUINE HERPESVIRUS 1 (STRAIN AB4P)	299-305							
P4T1I_VACCC	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	197-222							
P4T1I_VZVD	ALPHA TRANS-INDUCING FACTOR 74 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	215-241							
P4T1I_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	61-79	377-397						
P4T1N_HSV1P	ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN PH 2)	61-73							
P4T1N_HSVEB	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	101-120	377-393						
P4T1N_VZVD	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	104-123							
P4T1_COW7X	A-TYPE INCLUSION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	179-198							
P81_BBV	81 PROTEIN	COWPOX VIRUS	203-220							
P81G1_HSV4G	TRANSCRIPTIONAL REGULATORY PROTEIN	BLACK BEETLE VIRUS	389-412	1101-1118						
P8CM_EBV	DCU1 PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	11-32							
P8RLI_EBV	TRANSCRIPTION ACTIVATOR RTA1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	15-28							
PCJUN_VACCC	CELL SURFACE-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	96-133							
PCJUN_VACCV	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	16-33	200-224						
PCJUN_VARV	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN WR)	188-205							
PCOH_HSV1A	COMPL CONTROL PROTEIN HOMOLOG PREC	VARIOLA VIRUS	188-205							
PCEL_HSV11	CELL FUSION PROTEIN PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	188-205							
PCEL_HSV1K	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	326-344							
PCEL_HSV1R	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	178-196	212-230	286-309					
PCEL_HSVEB	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	178-196	212-230						
PCEL_VZVD	CELL FUSION PROTEIN PRECURSOR	HERPES SIMPLEX VIRUS TYPE 1 (STRAIN KENTUCKY A)	178-196	212-230	285-309					
PCOHG_HSV1A	CYCLIN HOMOLOG	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	203-223	239-268						
PCOA1_BFDV	COAT PROTEIN VP1	HERPESVIRUS SAIMIRI (STRAIN 11)	246-269							
PCOA1_POVBA	COAT PROTEIN VP1	BUDGERIGAR FLEDGLING DISEASE VIRUS	35-61	216-242						
PCOA1_POVK	COAT PROTEIN VP1	POLYOMAVIRUS BK (STRAIN AS)	93-110							
PCOA1_POVBO	COAT PROTEIN VP1	POLYOMAVIRUS BK	33-33	97-113	231-251					
PCOA1_POVMA	COAT PROTEIN VP1	BOVINE POLYOMA VIRUS	25-32	97-113	231-251					
PCOA1_POVKC	COAT PROTEIN VP1	HAMSTER POLYOMA VIRUS	96-120							
PCOA1_POVLY	COAT PROTEIN VP1	POLYOMAVIRUS JC	16-43							
PCOA1_POVAK	COAT PROTEIN VP1	LYMPHOTROPIC POLYOMA VIRUS	17-44	89-115	221-241					
PCOA1_SV40	COAT PROTEIN VP1	MOUSE POLYOMA VIRUS (STRAIN KILHAM)	97-113							
PCOA1_TPV1	COAT PROTEIN TP1	SIMIAN VIRUS 40	142-160	231-249						
PCOA2_POVBO	COAT PROTEIN VP2	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	27-44	99-125	233-253					
PCOA2_POVLY	COAT PROTEIN VP2	BOVINE POLYOMA VIRUS	80-103							
PCOA2_POVAO	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMA VIRUS	77-104							
PCOA2_TPV1	COAT PROTEIN TP2	MOUSE POLYOMA VIRUS (STRAIN 1)	79-102							
PCOAT_ABMVW	COAT PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	205-226							
PCOAT_BOCLV	COAT PROTEIN PRECURSOR	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	33-55							
PCOAT_CIVPJ	MAJOR CAPSID PROTEIN	BOCLAVIA VIRUS	148-171							
PCOAT_CLVK	COAT PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	181-401							
PCOAT_CLVN	COAT PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 84)	384-389	393-409						
PCOAT_CNVSI	COAT PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	165-188							
PCOAT_CNV	COAT PROTEIN	CYMBIDIUM MOSAIC VIRUS (STRAIN SINGAPORE)	165-188							
PCOAT_CSMV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	58-76							
PCOAT_CTV3A	COAT PROTEIN	CITRUS STRIATE MOSAIC VIRUS	19-42							
PCOAT_CVCA	COAT PROTEIN	CITRUS TRISTEZA VIRUS (ISOLATE T36)	219-238							
PCOAT_FCV1A	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN CFI/68 F1V)	73-94							
		FELINE CALICIVIRUS (STRAIN JAPAN/SE-F4)	564-583	641-664						
			564-583	641-659						

BAD ORIGINAL

PGCENTE	PIRCTSZIP	All Viruses (No Bacteriophage)									
PDBFRAME	PROTEIN	VIRUS	AREA1	AREA2 643,660	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PCOAT_FCV19	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	167,590								
PCOAT_FPV	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS	690,705								
PCOAT_FPV19	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS (STRAIN 19)	690,705								
PCOAT_IEVS	COAT PROTEIN	IDLEMIUM VIRUS S	47,46								
PCOAT_MEVA	COAT PROTEIN VP1	MINK ENTERITIS VIRUS (STRAIN ABASHIRI)	665,700								
PCOAT_MNSV	COAT PROTEIN	MELON NECROTIC SPOT VIRUS	55,53								
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	176,197	204,237							
PCOAT_NMV	COAT PROTEIN	NARCISSUS MOSAIC VIRUS	67,46								
PCOAT_NODAV	COAT PROTEIN PRECURSOR	NODAMURA VIRUS	139,394								
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	104,130								
PCOAT_ONMV	COAT PROTEIN	ONONIS YELLOW MOSAIC VIRUS	15,52								
PCOAT_PAVC2	COAT PROTEIN VP2	CANINE PARVOVIRUS (TYPE 2 / STRAIN A12)	167,562								
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN 78092)	685,700								
PCOAT_PAVCD	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN CPV-D CORNELL 130)	700,715								
PCOAT_PAVCN	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN N)	111,326								
PCOAT_PEMV	COAT PROTEIN PRECURSOR	PEPPER MOTTLE VIRUS	235,295								
PCOAT_PMV	COAT PROTEIN	PAPAYA MOSAIC POTEXVIRUS	81,101								
PCOAT_PMV5	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	64,84	103,139							
PCOAT_PVSP	COAT PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	128,169								
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	128,151								
PCOAT_SMYLM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	51,43								
PCOAT_SMYEA	COAT PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	57,72								
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	232,237								
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN DS-1)	159,383								
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	73,89								
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	154,173								
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMGMV STRAIN U1)	102,128								
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	103,138								
PCOAT_TMV06	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN 06)	102,128								
PCOAT_TMVDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAHLEMENSE)	102,128								
PCOAT_TMVER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	102,128								
PCOAT_TMVHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN HOLMES RIBGRASS (HR))	102,128								
PCOAT_TMVO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O)	102,128								
PCOAT_TMVOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	102,128								
PCOAT_TMVTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	102,128								
PCOAT_TNVA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	118,162								
PCOAT_TNVD	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D)	108,134								
PCOLL_HSV1C	COLLAGEN-LIKE PROTEIN	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	71,96								
PCORA_HPBV3	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADW3)	19,100								
PCORA_HPBVA	CORE ANTIGEN	HEPATITIS B VIRUS (STRAIN ALPHA)	15,31								
PCORA_HPBV2	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADYW)	19,100								
PDNBI_ADE72	PROBABLE DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	71,93								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	649,673								
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	881,968								
PDNBI_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	459,476	597,620							
PDNBI_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	459,476	597,620							
PDNBI_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	459,476	597,620							
PDNBI_HSV21	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN DAVY)	453,473	596,616							
PDNBI_HSV2B	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	810,811								
PDNBI_HSV3A	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	108,133	610,639	669,887	974,1000					
PDNBI_MCMV5	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	637,664								
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLLIURN)	188,212	641,670							
PDNU_VACV	DNA LIGASE	VACCINIA VIRUS	269,294								
PDPOL_ADE01	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	264,283	818,850							
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	264,283	818,850							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	331,350	894,917							
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	262,281	562,787	826,848						

BAD ORIGINAL

FCGENE	FILCTL2IP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PDPOL_CBEPV	DNA POLYMERASE	CHORDOPOXVIRUS	430-434	634-638	713-717						
PDPOL_CHVN1	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	424-442								
PDPOL_CHVP1	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	424-442								
PDPOL_EBV	DNA POLYMERASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	133-172								
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	354-374	438-461	528-547	667-687	933-990				
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	66-77	128-147							
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S1)	569-587	643-660	1028-1051						
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	4-29	133-174	323-341	534-552					
PDPOL_HPBDU	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	4-29	133-174	323-340	533-551					
PDPOL_HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	181-200	213-231							
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	448-455	132-174	322-341	534-552					
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	4-29	334-352							
PDPOL_HPBV2	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW2)	413-419	423-461	567-586						
PDPOL_HPBV4	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW4)	413-419								
HPOL_HPBVV	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW / STRAIN 991)	413-419	441-461	561-580	4					
PDPOL_HPBVA	DNA POLYMERASE	HEPATITIS B VIRUS (STRAIN ALPHA1)	10-96	199-216	410-433	750-767					
PDPOL_HPBVI	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW220)	10-96	410-433	415-468	761-778					
PDPOL_HPBVJ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/JUW1111)	10-96	410-433	415-468	761-778					
PDPOL_HPBVL	DNA POLYMERASE	HEPATITIS B VIRUS (STRAIN LSH/CHIMPANZEE ISOLATE)	10-96	199-216	410-433	750-767					
PDPOL_HPBVM	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AIM / MUTANT)	10-96	410-433	760-779						
PDPOL_HPBVO	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AIM / STRAIN OKINAWA/JOUW182)	10-96	410-433	445-468	761-778					
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINOP/IDW294)	413-419	441-461							
PDPOL_HPBVR	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADR)	10-96	410-433	761-778						
PDPOL_HPBVW	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW)	82-98	403-432	440-456						
PDPOL_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	10-96	199-216	434-457	750-767					
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	10-96	199-216	434-457						
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	797-817	877-897	1013-1040						
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	797-817	877-897	1013-1040						
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	797-817	877-897	1013-1040						
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	797-817	877-897	1013-1040						
PDPOL_HSV2G	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	802-822	882-902	1018-1045						
PDPOL_HSV6U	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	653-672	786-805	858-883						
PDPOL_HSVEB	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	283-299	377-392	434-477	798-818	878-894				
PDPOL_HSVI1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	237-275	397-418							
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	118-137	297-319	344-364	514-532	935-952				
PDPOL_MCMV5	DNA POLYMERASE	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	303-322	535-553	780-802						
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	518-536	676-697							
PDPOL_VAAV	DNA POLYMERASE	VARIOLA VIRUS	421-457								
PDPOL_VZVD	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	312-331	363-382	440-463	713-740	737-781	1006-1024			
PDPOL_WTV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	440-457								
PDPOL_WTV9	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	431-478								
PDPOL_WTV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	431-478								
PDPOL_WTV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	450-477	514-531							
PDPOL_WTV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	431-478								
PDPOL_WTVW6	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PW533)	123-150								
PDPOM_XPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	399-416	438-450	730-747						
PDUT_HCMVA	DUTPASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-126								
PDUT_HSVEA	DUTPASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	130-154								
PDUT_HSVEB	DUTPASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	130-149								
PDUT_HSVI1	DUTPASE	ICTALURID HERPESVIRUS 1	72-93								
PDUT_HSVSA	DUTPASE	HERPESVIRUS SAIMIRI (STRAIN 11)	22-45	79-104	438-450	730-747					
PE111_ADE41	EARLY E1A 11 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	22-47		168-185						
PE1A6_ADE07	EARLY E1A 6.3 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	8-33								
PE1A_ADE04	EARLY E1A 28 KD PROTEIN	HUMAN ADENOVIRUS TYPE 4	104-120								
PE1A_ADE07	EARLY E1A 28 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	8-33								
PE1A_ADE37	EARLY E1A 28 KD PROTEIN	SIMIAN ADENOVIRUS TYPE 7	173-189	228-244							
PE1BL_ADE12	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	451-467								

BAD ORIGINAL

PCGENE	PRICTL2IP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PE1BL_ADEC2	E1B PROTEIN, LARGE T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	101-122								
PE1BL_ADENT	EARLY E1B 44 KD PROTEIN	TUPAIA ADENOVIRUS	75-101								
PE1BS_ADEC2	E1B PROTEIN, SMALL T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	55-77								
PE1BS_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	118-138								
PE3I0_ADE02	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 2	3-21	34-60							
PE3I0_ADE05	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	3-21	33-60							
PE3I0_ADE07	EARLY E3B 10 4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	3-24								
PE3I1_ADE02	EARLY E3A 11 6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 2	27-51								
PE3I1_ADE03	EARLY E3 9 0 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	19-45								
PE3I1_ADE05	EARLY E3A 10 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 5	20-46								
PE3I1_ADE07	EARLY E3 7 7 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	36-62								
PE3I4_ADE03	EARLY E3 14 5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	108-125								
PE3I5_ADE03	EARLY E3B 14 5 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 3	52-72								
PE3I5_ADE07	EARLY E3B 14 9 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	52-72								
PE3I6_ADE03	EARLY E3 16 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	102-125								
PE3I9_ADE03	EARLY E3 20 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	146-167								
PE3I9_ADE07	EARLY E3 20 5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 7	146-167								
PE3I9_ADEC1	EARLY E3 22 3 KD GLYCOPROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	153-177								
PE3I9_ADEM1	EARLY E3 17 7 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	105-133								
PE4I1_ADE02	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	56-77								
PE4I1_ADE05	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	56-77								
PE4I3_ADEM1	PROBABLE EARLY E4 33 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	61-80								
PE4I4_ADE02	EARLY E4 34 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	80-106								
PEAD_EBV	EARLY ANTIGEN PROTEIN D	EPSTEIN-BARR VIRUS (STRAIN B95-8)	263-286								
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-184								
PEBN2_EBV	EBNA-2 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	126-141								
PEBN3_EBV	EBNA-3 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-131	662-683							
PEFT1_VARV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	21-41								
PENV1_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407								
PENV2_FRSFV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407								
PENV_AVBJ	ENV POLYPROTEIN	AVIAN RETROVIRUS RPL30	206-225								
PENV_AVISU	COAT PROTEIN GP37	AVIAN SARCOMA VIRUS (STRAIN UR1)	98-117								
PENV_BAEVM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	170-190	202-224							
PENV_BIV06	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	47-68	178-201	434-450	525-546					
PENV_BIV27	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	47-68	147-168	207-230	463-479	534-575				
PENV_BLVAJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	303-327								
PENV_BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	303-327								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	303-327								
PENV_BLVB3	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	303-327								
PENV_BLVB5	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	303-327								
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	303-327								
PENV_FENV1	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	30-47	225-246	630-651						
PENV_FIVPE	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	30-47	225-246	630-651						
PENV_FLVCA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	38-55	624-645							
PENV_FLVGL	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	9-29	447-468	605-626						
PENV_FLVLB	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	467-488	625-646							
PENV_FLVSA	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	444-465	602-623							
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	153-174	235-255	300-325	481-496	710-727	864-887	924-951	957-978	
PENV_FSVGA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	467-488	625-646							
PENV_FSVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	447-468	605-626							
PENV_FSVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	450-471	608-629							
PENV_FSVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	467-488								
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	519-540								
PENV_HV1B1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/II0 ISOLATE)	498-520								
PENV_HV1B8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (D1/8 ISOLATE)	493-515								
PENV_HV1BN	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	494-516								
PENV_HV1BR	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	503-525								

PCGENE	P15172|P	All Viruses (No Retroviruses)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PENV_HV1C4	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE 941)	418,468							
PENV_HV1EL	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE ELI)	495,917							
PENV_HV1H3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE H3)	498,520							
PENV_HV1H3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE H3)	498,520							
PENV_HV1J5	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE J5)	498,520							
PENV_HV1K1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE K1)	510,533							
PENV_HV1MA	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE MA)	490,533							
PENV_HV1MG	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE MAL)	504,576	533,568						
PENV_HV1MN	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE MN)	500,522							
PENV_HV1ND	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE NIH-Z)	496,518							
PENV_HV1OY	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	178,203							
PENV_HV1PV	GP140 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	488,510							
PENV_HV1RU	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	121,140							
PENV_HV1S1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	498,530							
PENV_HV1S5	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	441,460							
PENV_HV1Z3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF-162 ISOLATE)	489,511	533,554						
PENV_HV1Z3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	500,522							
PENV_HV1Z3	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE)	121,145	410,427						
PENV_HV1Z6	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	117,133	175,198						
PENV_HV1Z8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	497,519							
PENV_HV2H2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (2.84 ISOLATE)	503,537							
PENV_HV2BE	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ZAIRE (82)21 ISOLATE)	122,142	438,451	498,520					
PENV_HV2CA	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	3,26	350,375	511,604					
PENV_HV2D1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM1)	750,777							
PENV_HV2G1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	3,26	741,766	772,795					
PENV_HV2N2	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9,38							
PENV_HV2RO	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GUIANA-1)	741,764	775,793						
PENV_HV2S8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	742,767	777,800						
PENV_HV2S8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	751,776							
PENV_HV2S1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL1SY)	741,761	778,804						
PENV_3IEV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	745,778							
PENV_MCF7	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	104,119	399,423	176,198	341,364				
PENV_MCFAV	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI)	600,631							
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	601,633							
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	630,631							
PENV_MLVFS	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	633,648							
PENV_MLVFF	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FD29)	639,660							
PENV_MLVFP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FP7)	639,660							
PENV_MLVFM	ENV POLYPROTEIN PRECURSOR	HOMOLY MURINE LEUKEMIA VIRUS (ISOLATE FVC-51)	639,660							
PENV_MLVFU	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	626,647							
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	187,188							
PENV_MLVRD	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	639,650							
PENV_MLVRK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	634,645							
PENV_MMTVB	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	634,645							
PENV_MMTVO	ENV POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	641,663							
PENV_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	643,665							
PENV_MSVYB	ENV POLYPROTEIN	FBJ MURINE OSTEOSARCOMA VIRUS	213,233							
PENV_OMVVS	ENV POLYPROTEIN PRECURSOR	OVINE LENTIVIRUS (STRAIN S.A.OMVV)	170,191							
PENV_RMCFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	638,683							
PENV_RSVP	ENV POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	600,624							
PENV_SFV1	ENV POLYPROTEIN PRECURSOR	SEMLIKI FOREST VIRUS (TYPE 1)	42,69	533,552						
PENV_SFV3L	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	100,133	710,737	844,887	924,951	937,978			
PENV_SIVAI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	137,178	204,239	703,724	861,884	921,948	934,975		
PENV_SIVAG	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	417,458							
PENV_SIVAI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GRI-1)	442,463							
PENV_SIVAT	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	421,442							
PENV_SIVGB	GP140 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	415,436							
			91,109							

BAD ORIGINAL

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PENV_SIVMI	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83) ISOLATE)	706:791	801:816							
PENV_SIVK2	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	139:154	761:791	801:811						
PENV_SIVK6	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	139:154	764:791	801:816						
PENV_SIVS6	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (F236SMM4 ISOLATE)	769:789	806:819							
PENV_SIVSP	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (PBIMC11 ISOLATE)	137:791	810:811							
PENV_SMSAV	PISE PROTEIN	SIMIAN SARCOMA VIRUS	42:63								
PENV_SRVI	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	211:235								
PEBA_AVIEA	EBNA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	237:249								
PETF1_FOWPI	EARLY TRANSCRIPTION FACTOR	FOWLPOX VIRUS (STRAIN FP-1)	21:41	77:92							
PETF1_SFVEA	EARLY TRANSCRIPTION FACTOR	SHOPE FIBROMA VIRUS (STRAIN KASZA)	21:41								
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	21:41								
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN WR)	21:41								
PETF1_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	50:73	101:117	165:187	215:308	558:582				
PETF1_VACCV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	48:72								
PETF1_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	50:73	101:117	165:187	215:308	558:582				
PEXON_HSV11	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	103:180								
PEXON_HSV2	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 2)	135:170								
PEXON_HSV78	ALKALINE EXONUCLEASE	EQUINE HERPES VIRUS TYPE 1 (STRAIN AB4P)	276:291								
PEXON_PRVN3	ALKALINE EXONUCLEASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	36:51								
PEXON_VLVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN HUMAN)	38:44	213:264							
PFIB1_ADE40	61.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	116:133								
PFIB1_ADE41	61.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	116:133								
PFIBP_ADE03	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 3	152:173								
PFIBP_ADE05	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 5	401:413								
PFIBP_ADE07	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3 (MASTADENOVIRUS DOSI)	347:372	775:801							
PFIBP_ADEC1	FIBER PROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	182:197								
PFIBP_ADEM1	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	191:215	225:255	401:417	468:514	575:599				
POAO_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS VIRUS EV-1	53:78								
POAO_AVEV3	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	2:27								
POAO_AVMYC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	53:78								
POAO_AVMYD	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS 1811	53:78								
POAO_AVSU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	53:78								
POAO_AVSY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y73)	53:78								
POAO_BAEV4	GAG POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	397:422								
POAO_BLVAU	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	212:238								
POAO_BLVJ	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	213:239								
POAO_CAEVC	GAG POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	102:119								
POAO_FUSSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	53:78								
POAO_HTL1A	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	77:94								
POAO_HTL1C	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	77:94								
POAO_HTL1M	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	77:94								
POAO_HVIA2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV/5F2 ISOLATE)	65:91								
POAO_HVIB1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	65:91								
POAO_HVIB5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH5 ISOLATE)	65:91								
POAO_HVIBR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	65:91								
POAO_HVIC4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (CDC-451 ISOLATE)	65:91								
POAO_HVIEL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	65:91								
POAO_HVIH2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	65:91								
POAO_HVIJ1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JH1 ISOLATE)	65:91								
POAO_HVIJR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRCSF ISOLATE)	65:91								
POAO_HVIMA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MAL ISOLATE)	162:185								
POAO_HVIMN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MN ISOLATE)	65:91								
POAO_HVINS	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NEW YORK-5 ISOLATE)	65:91								
POAO_HVINY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NDK ISOLATE)	65:91	152:177							
POAO_HVIOY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (OYI ISOLATE)	65:91								
POAO_HVIPV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (PV22 ISOLATE)	65:91								
POAO_HVIRU	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RU1AT ISOLATE)	65:91								

BAD ORIGINAL

PGCLRF	PFICTLIP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
POAG_HV1M	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDA) / ISO	63-91								
POAG_HV1W3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ) ISOLATE)	63-91								
POAG_HV1Z2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z1) ISOLATE)	63-91								
POAG_IPMA	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	137-737								
POAG_MMTVB	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN HRA)	82-97								
POAG_MMTVC	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)	82-97								
POAG_MMTVO	GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	82-97								
POAG_RSVP	GAG POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	51-78								
POAG_SCVLA	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A	611-647								
POAG_SIVI	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	61-101								
POAG_SIVIL	GAG POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1) STRAIN LK3)	61-101								
POAG_SIVAI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	189-233								
POAG_SIVAG	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM1 ISOLATE)	193-237								
POAG_SIVAT	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	189-233								
POAG_SIVCZ	GAG POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ)	66-92								
POAG_SIVGD	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	66-92								
POAG_SIVMI	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE-8) ISOLATE)									
POAG_SMRVH	GAG POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS (SMRV-H)	186-307								
PGLAX_VACCC	POSSIBLE GLUTAREDOXIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-123								
PGLAX_VACCV	GROWTH FACTOR	VACCINIA VIRUS (STRAIN WR)	104-123								
PGLAX_VARV	POSSIBLE GLUTAREDOXIN	VARIOLA VIRUS	71-87								
PGRAN_DVAS	GRANULIN	AGROTIS SEGETUM GRANULOSIS VIRUS	208-226								
PGRAN_OVTN	GRANULIN	TRICHOPLUSIA NI GRANULOSIS VIRUS	209-227								
PGRFA_VACCC	GROWTH FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-124								
PGRFA_VACCV	GROWTH FACTOR	VACCINIA VIRUS (STRAIN WR)	104-123								
PGRFA_VARV	GROWTH FACTOR	VARIOLA VIRUS	104-123								
PHEL1_EBV	PROBABLE HELICASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	186-307	338-761	438-464						
PHEL1_HCMVA	PROBABLE HELICASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	397-420	539-560	626-652						
PHEL1_HSV1	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	389-408	618-646							
PHEL1_HSV2H	PROBABLE HELICASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	290-309	529-554							
PHEL1_HSV2B	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP)	181-204	243-266	284-413						
PHEL1_HSV2A	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	337-358	389-411	651-680						
PHEL1_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	185-189	383-402	561-578	761-786					
PHEMA_CDVD	HEMAGGLUTININ-NEURAMINIDASE	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	36-53	180-203							
PHEMA_CVBF	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	391-415								
PHEMA_CVBLY	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	391-415								
PHEMA_CVBM	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	391-415								
PHEMA_CVBQ	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC), AND (STRAIN L9)	391-415								
PHEMA_CVHOC	HEMAGGLUTININ-ESTERASE PRECURSOR	HUMAN CORONAVIRUS (STRAIN OC-43)	391-415								
PHEMA_CVMAS	HEMAGGLUTININ-ESTERASE PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	403-423								
PHEMA_CVMJ	HEMAGGLUTININ-ESTERASE PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN S)	403-418								
PHEMA_IAAIC	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/AICHI/2/68)	37-59	322-339							
PHEMA_IABAN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	21-41	306-323							
PHEMA_IABUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/71)	336-357								
PHEMA_IACKA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/ALABAMA/1/75)	336-357								
PHEMA_IACKG	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	81-101	231-247	316-333						
PHEMA_IACKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	302-319								
PHEMA_IACKS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/SCOTLAND/59)	302-319								
PHEMA_IACKV	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/CHICKEN/VICTORIA/1/85)	318-336								
PHEMA_IADK1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	336-357	315-332							
PHEMA_IADK3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/76/76)	336-357								
PHEMA_IADK2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAK/1/56)	337-359	322-339							
PHEMA_IADE1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	336-357								
PHEMA_IADH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/313/76)	286-307	319-336							
PHEMA_IADH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/8/80)	336-357								
PHEMA_IADH4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/80)	21-41	306-323							
PHEMA_IADH5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/7/81)	21-41	306-323							

BAD ORIGINAL

PCGENE	PICTCLIP	All Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PIEMA_UADI3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/1/82)	21-41	215-237							
PIEMA_UADI4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/9/81)	21-41	206-228							
PIEMA_UADI7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/HOKKAIDO/10/85)	21-41	206-228							
PIEMA_UADM3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	17-38	117-139							
PIEMA_UADN4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/3/53)	18-39	81-101							
PIEMA_UADN2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/1/76)	326-337								
PIEMA_UADU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	17-39	122-139							
PIEMA_UADW4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1/79)	21-41	206-223							
PIEMA_UADY7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENGLAND/2/1971)	17-39	122-139							
PIEMA_UAFP4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	326-346	315-332							
PIEMA_UAGR2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	326-337								
PIEMA_UAGU1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GUILLAMARTLAND/79/73)	326-337								
PIEMA_UAGU4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/GUILLASTRAKHAN/232/84)	319-336								
PIEMA_UAHA1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/ALGIERS/72)	331-348								
PIEMA_UAHC4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CALIFORNIA/1/84)	326-346	315-332							
PIEMA_UAHC7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/CALIFORNIA/1/91)	326-346	315-332							
PIEMA_UAHC8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	326-346	315-332							
PIEMA_UAHD8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/DETROIT/1/64)	326-346	315-332							
PIEMA_UAHF0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/FONTAINEBLEAU/76)	326-352	321-338							
PIEMA_UAHJ1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/2/86)	321-338								
PIEMA_UAHK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/87)	326-352	321-338							
PIEMA_UAHL6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LEXINGTON/1/66)	326-346	315-332							
PIEMA_UAHL8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/1971)	326-346	315-332							
PIEMA_UAHM2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	326-352	321-338							
PIEMA_UAHN4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/76)	326-352	321-338							
PIEMA_UAHP1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/NEW MARKET/1/77)	315-332								
PIEMA_UAHR0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	326-352	321-338							
PIEMA_UAHS4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SANTIAGO/1/65)	326-352	321-338							
PIEMA_UAHS5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SAO PAULO/1/76)	330-346	315-332							
PIEMA_UAHS8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/SWITZERLAND/1/72)	326-346	315-332							
PIEMA_UAHT5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	326-352	321-338							
PIEMA_UAHT0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/TOKYO/1)	326-352	321-338							
PIEMA_UAHU8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/EQUINE/URUGUAY/1/63)	326-352	321-338							
PIEMA_UAIA9	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAPANUI/50/97)	317-334								
PIEMA_UAMA8	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	197-213	219-236							
PIEMA_UAMA9	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/263/82)	205-218	324-341							
PIEMA_UAMC0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	17-39	122-139							
PIEMA_UAME1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	17-39	122-139							
PIEMA_UAME6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/102/72)	17-39	122-139							
PIEMA_UAMI0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/5/88)	21-43	206-223							
PIEMA_UAMN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	85-101	211-227	116-133						
PIEMA_UAMT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MT/60/68)	17-39	122-139							
PIEMA_UAPL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WHALE/MAINE/2/84)	326-346	315-332							
PIEMA_UAQU7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUAIL/70)	21-43	206-223							
PIEMA_UARU0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/87)	326-337								
PIEMA_UASE3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	320-337								
PIEMA_UASH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/1/72)	326-350	321-338							
PIEMA_UAST4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/1/85)	326-346	315-332							
PIEMA_UATK0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1/80)	17-39	122-139							
PIEMA_UATK4	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	333-349	326-343							
PIEMA_UATK7	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	330-346								
PIEMA_UATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	329-345								
PIEMA_UAUD0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	17-39	122-139	180-197						
PIEMA_UAVI1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	18-40	123-140							
PIEMA_UAZ01	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN K-11)	17-39								
PIEMA_UAZC0	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/COLORADO/1/77)	17-39	122-139							

BAD ORIGINAL

PCGENE	P1JCTLZIP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PIEMA_IAZH1	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	31-43	306-323							
PIEMA_IAZH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1516/82)	31-43	306-323							
PIEMA_IAZUK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SWINE/UKKEU/1/84)	37-59	322-339							
PIEMA_INBAA	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/86)	115-131	295-310							
PIEMA_INBBE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	123-139	303-318							
PIEMA_INBBO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/45)	116-132	295-308							
PIEMA_INBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	123-139	301-316							
PIEMA_INBFU	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/FUKUOKA/RO/81)	108-124	286-301							
PIEMA_INBGL	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/GL/54)	119-135	296-311							
PIEMA_INBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	116-132	295-308							
PIEMA_INBIB	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/IBARAKI/2/85)	108-124	288-303							
PIEMA_INBID	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ID/86)	120-136	299-314							
PIEMA_INBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	123-139	302-317							
PIEMA_INBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	123-139	292-307							
PIEMA_INBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	116-132	296-311							
PIEMA_INBNA	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/NAGASAKI/1/87)	108-124	288-303							
PIEMA_INBOR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	123-139	301-316							
PIEMA_INBSI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	123-139	301-316							
PIEMA_INBSJ	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/64)	119-135	298-313							
PIEMA_INBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	116-132	294-309							
PIEMA_INBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/3/85)	116-132	296-311							
PIEMA_INBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	123-139	303-318							
PIEMA_INBYB	HEMAGGLUTININ	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/16/88)	108-124	288-303							
PIEMA_INCCA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	442-466								
PIEMA_INCEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	430-454								
PIEMA_INCGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	430-454								
PIEMA_INCHY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	429-453								
PIEMA_INCJH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	443-467								
PIEMA_INCKY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/KYOTO/41/82)	429-453								
PIEMA_INCMI	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	429-453								
PIEMA_INCNA	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/NARA/82)	429-453								
PIEMA_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/10/81)	430-454								
PIEMA_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/115/81)	430-454								
PIEMA_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/PIG/BEIJING/439/82)	430-454								
PIEMA_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/TAYLOR/1233/47)	430-454								
PIEMA_INCYA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	430-454								
PIEMA_MUMP1	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL-1)	101-125	133-148	225-246	367-394	397-417				
PIEMA_MUMPM	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	101-125	133-148	225-246	367-394	397-417				
PIEMA_MUMPR	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN RW)	101-125	133-148	225-246	367-394	397-417				
PIEMA_MUMPS	HEMAGGLUTININ-NEURAMINIDASE	MUMPS VIRUS (STRAIN SBL)	101-125	133-148							
PIEMA_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	93-110								
PIEMA_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	93-110								
PIEMA_NDVD	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D26/76)	93-110								
PIEMA_NDVH1	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	93-110								
PIEMA_NDVI	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	93-110								
PIEMA_NDVM	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	93-110								
PIEMA_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	93-110								
PIEMA_NDVT0	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B /48)	93-110								
PIEMA_NDVU	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	93-110								
PIEMA_PI10DV	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	36-58	213-234	493-513						
PIEMA_PI1IW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	39-53	322-342	345-360	486-503					
PIEMA_PI2II	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	13-40	65-88	118-136						
PIEMA_PI2HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	13-40	65-88	118-136						
PIEMA_PI3B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	111-128	272-299	324-340						
PIEMA_PI3H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	111-128	272-299	324-340						
PIEMA_PI3HA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/124854/74)	111-128	272-299	324-340						
PIEMA_PI3HT	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	111-128	272-299	324-340						

BAD ORIGINAL

PCGENE FILE NAME	FUNCTION PROTEIN	All Viruses (No Bacteriophage) VIRUS	ABRAL	ABRAL	ABRAL	ABRAL	ABRAL	ABRAL	ABRAL	ABRAL
PIRNA_PIRHU	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEXAS/10/62)	111-138	272-299	324-340					
PIRNA_PIRHV	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEXAS/12/83)	111-138	272-299	324-340					
PIRNA_PIRHW	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASHINGTON/)	111-138	272-299	324-340					
PIRNA_PIRHX	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASHINGTON/)	111-138	272-299	324-340					
PIRNA_PIRHA	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	86-87							
PIRNA_RDVDL	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	4-10							
PIRNA_SENDS	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN 7 / HOST KIDNEY)	122-142							
PIRNA_SENDF	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	122-142							
PIRNA_SENDI	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HVJ)	122-142							
PIRNA_SENDZ	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	122-142							
PIRNA_SV5	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	55-73	85-102	107-113					
PIRNA_SV5CA	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN WR)	7-28	84-101	119-400					
PIRNA_SV5CP	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/CPI+)	7-28	84-101	119-400					
PIRNA_SV5LN	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/CPI+)	7-28	84-101	119-400					
PIRNA_VACCC	HEMAGGLUTININ-NEURAMINIDASE PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-28	84-101	119-400					
PIRNA_VACCI	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN IHD-J)	172-192	175-192						
PIRNA_VACCT	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN TIAN TAN)	172-192	175-192						
PIRNA_VACCV	HEMAGGLUTININ PRECURSOR	VACCINIA VIRUS (STRAIN WR)	172-192	175-192						
PIRNA_VARV	HEMAGGLUTININ PRECURSOR	VARIOLA VIRUS	172-192	175-192						
PIRX1_ADE01	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 1	175-194							
PIRX1_ADE03	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 3	38-61	109-140						
PIRX1_ADE05	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	27-48							
PIRX1_ADE41	HEXON-ASSOCIATED PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 41	38-61	109-140						
PIRX1_ADEM1	HEXON-ASSOCIATED PROTEIN PRECURSOR	MOUSE ADENOVIRUS TYPE 1	38-61	128-146						
PIRX1_ADE07	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 7 AND 7	16-32							
PIRX1_ADECI	HEXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 1	92-117							
PIRX1_ADENT	HEXON-ASSOCIATED PROTEIN	TUPAIA ADENOVIRUS	52-77							
PIRX1_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	60-82							
PIT1_ASFB1	LATE PROTEIN I1 P1L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	517-533	558-581	609-636					
PI1K_ASFB1	LATE PROTEIN I1 P14L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	68-83							
PI126_ASFB1	LATE PROTEIN I126L	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	169-190							
PI130_ASFB1	LATE PROTEIN I130L PRECURSOR	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	46-77							
PI78_ASFB1	EARLY PROTEIN I78R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	239-260							
PIMP_SOYAV	INCLUSION BODY MATRIX PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	2-29							
PIC10_EBV	PROBABLE PROCESSING AND TRANSPORT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	93-119							
PIC10_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-133	131-153	158-177					
PIC10_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	194-176	202-222						
PIC10_HSV1A	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	8-29	45-61	132-143	151-168				
PIC10_HSV1F	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	8-29	45-61	132-143	151-168				
PIC10_HSV1I	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	8-29	132-141	146-161					
PIC10_HSV1S	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN DUKAS)	12-17	130-151						
PIC10_HSV1X	PROBABLE PROCESSING AND TRANSPORT PROTEIN	EQUINE HERPESVIRUS TYPE 1	12-16	130-144						
PIC10_HSV1A	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	17-49	51-78	112-135					
PIC10_HCMV3	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN SMITH)	128-144	202-239	641-672					
PIC10_PAVD	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	185-207	698-718	186-411					
PIC10_VZVD	PROBABLE PROCESSING AND TRANSPORT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	69-88	619-639	735-744					
PIC10_HSV11	IMMEDIATE-EARLY PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	668-684							
PIC10_HSV2H	VMW110 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	113-129							
PIC10_PAVD	EARLY PROTEIN 0	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	82-102							
PIC11_HSV1F	INFECTED CELL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	111-127							
PIC14_HSV11	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	81-98	623-637						
PIC14_HSV1B	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	708-723	736-759						
PIC14_HSV1K	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	708-723	736-759						
PIC14_HSV1G	TRANS-ACTING TRANSACTIVATOR PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	488-504	515-531	1203-1218					
PIC14_VZVD	TRANS-ACTING TRANSCRIPTIONAL PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	143-163							

BAD ORIGINAL

PCGENE	P1FCTLIP	All Viruses (No Bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
P1E10_PRVIF	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN INDIANA-P UNKHAUSER / DECKER)	731-746	770-787						
P1E11_PRVKA	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN KAPLAN)	770-787							
P1E61_HCMVA	TRANSCRIPTIONAL REGULATOR IE61 HOMOLOG1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	284-304	364-383						
P1E61_HSV11	TRANSCRIPTIONAL REGULATOR IE61	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	378-394							
P1E61_HSV1H	TRANSCRIPTIONAL REGULATOR IE61	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	378-394							
P1E61_HSV1D	TRANSCRIPTIONAL REGULATOR IE61 HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	378-394	384-404						
P1E61_HSV2A	52 KD IMMEDIATE-EARLY PHOSPHOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	301-316							
P1E64_HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-205							
P1E68_HSVE4	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4	81-104							
P1E81_HSVEB	IMMEDIATE-EARLY PROTEIN	EQUINE HERPESVIRUS TYPE 1	93-116							
P1E81_PRVKA	IMMEDIATE-EARLY PROTEIN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	93-116							
P1E84_VZVD	GENE 63/70 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	85-108							
P1F1_ICMVA	HYPOTHETICAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	53-78							
P1E88_AVEB	ERBB TYROSINE KINASE TRANSFORMING PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS	111-137							
P1F1E3_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	64-84	291-324						
P1F1E3_FSVST	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	55-86							
P1F1GA_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	2-32							
P1F1M3_FSVMD	FMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	269-288							
P1F1P3_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	AVIAN SARCOMA VIRUS (STRAIN PRC11)	141-159	240-263	414-430	548-565	781-801	816-837		
P1F1P5_FUSIV	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FUJINAMI SARCOMA VIRUS	241-254							
P1F1R_ASFB7	THYMIDINE KINASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	259-275	346-370	400-420	587-614				
P1F1R_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	18-41							
P1F1R_FLDV	THYMIDINE KINASE	FISH LYMPHOCYSTIS DISEASE VIRUS	407-410	428-446						
P1F1R_HSV11	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	96-117	235-271						
P1F1R_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	223-249							
P1F1R_HSV1F	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	223-249							
P1F1R_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	223-249							
P1F1R_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	223-249							
P1F1R_HSV1J	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	223-249							
P1F1R_HSV2G	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN 6660)	226-250	333-348						
P1F1R_HSV2H	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN DUKE-1)	193-219	280-304						
P1F1R_HSV2Q	THYMIDINE KINASE	BOVINE HERPES VIRUS TYPE 1 (STRAIN WC11)	180-202							
P1F1R_HSVE4	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 2 (STRAIN Q1921)	181-199	609-631						
P1F1R_HSVEB	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	196-220	287-306						
P1F1R_HSV1	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HVS25A)	174-193	261-284						
P1F1R_HSV1	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	18-33	274-298						
P1F1R_HSV1I	THYMIDINE KINASE	ICTALURID HERPESVIRUS 1	131-189							
P1F1R_HSV1M	THYMIDINE KINASE	MARMOSET HERPESVIRUS	14-32							
P1F1R_HSV1A	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	189-211							
P1F1R_ILTV1	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN TIMORE VIB)	208-232							
P1F1R_VZV1	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 40A2)	181-202	208-234						
P1F1R_VZV7	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 7.1.1)	197-216							
P1F1R_VZVD	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	197-216							
P1F1R_VZVW	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN GK)	197-216							
P1F1T_FSVHZ	KIT TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 4)	197-214	316-337						
P1F15_HSV11	GENE 13 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	131-161	198-224						
P1F16_HSV11	GENE 16 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	197-217	280-311						
P1K1_HSV11	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	280-296	338-357						
P1K1_HSV2_	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 2)	276-296	338-357						
P1K1_HSVEB	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	289-307							
P1K1_HSVEK	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	289-307							
P1K1_VZVD	SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	196-217							
P1K2_EBV	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	196-211	333-358						
P1K2_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	267-287							
P1K2_HSVEB	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	317-339	441-462						
P1K2_PRVKA	SERINE/THREONINE-PROTEIN KINASE 2	PSEUDORABIES VIRUS (STRAIN NIA-3)	184-185	382-385						

BAD ORIGINAL

PCGENE	FUNCTION	AA Viruses (No Bacteriophage)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRAJ_VZVD	PROBABLE SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	116-131	226-247	134-371						
PRR11_HSV11	GENE 11 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	141-158								
PRR14_HSV11	GENE 14 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	159-180	548-575							
PRR1_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	199-214								
PRR1_VACCV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	199-214								
PRR1_VAIV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	199-214								
PRR1_SFVKA	POSSIBLE PROTEIN KINASE C20	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-98								
PRR1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-100								
PRR1_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	52-67								
PRR1_VAIV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	85-100								
PKR0_AVISU	ROS TYR KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN UR2)	6-29	202-223	284-305						
PKR1E_AVIRE	TYR-PROTEIN KINASE TRANSFORMING PROTEIN R	AVIAN RETROVIRUS RPL30	154-172	221-241							
PKR1E_AVIET	TYR-PROTEIN KINASE TRANSFORMING PROTEIN ET	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN S11)	158-177								
PKR1E_AVIS1	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN PR2257)	161-337								
PKR1E_AVISR	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN RASV1441)	161-337								
PKR1E_AVIS1	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN S1)	161-337								
PKR1E_AVIST	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN ST)	161-337								
PKR1E_RSVH1	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN H-19)	161-337								
PKR1E_RSVP1	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	161-337								
PKR1E_RSVPA	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN PAIOTT)	161-337								
PKR1E_RSVSR	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	ROUS SARCOMA VIRUS (STRAIN SCHMIDT-RUPPIN)	158-334								
PKR1E_AVISY	TYR-PROTEIN KINASE TRANSFORMING PROTEIN Y	AVIAN SARCOMA VIRUS (STRAIN Y73)	161-337								
PL100_ADE01	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 1	161-337								
PL100_ADE03	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	489-511								
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	489-511								
PL33_ADE01	LATE L1 33 KD PROTEIN	HUMAN ADENOVIRUS TYPE 1	438-460								
PL33_ADE03	LATE L1 33 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	311-334								
PLEC1_FOWPM	180 PATHOGENIC LECTIN HOMOLOG	FOWLPOX VIRUS (ISOLATE HP-438(NIMROD))	217-239								
PLM1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	2-76								
PLM1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-43	79-100							
PLM1_EBVB	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-43	79-100							
PLM1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	20-43	79-100							
PMCE1_SFVKA	MRNA CAPPING ENZYME, LARGE SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	181-196	264-326	267-288	291-315	346-366	390-410			
PMCE1_VACCC	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	244-260	316-338	670-699						
PMCE1_VACCV	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN WR)	81-103	265-283	288-313	687-707					
PMCE1_VAIV	MRNA CAPPING ENZYME	VARIOLA VIRUS	81-103	265-283	288-313	687-707					
PMCE_AIIV1	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	265-282	288-312	687-707						
PMCE_REOVD	MRNA CAPPING ENZYME	REOVIRUS (TYPE 3 / STRAIN DEARING)	117-143								
PMOV1_CDMVS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN	167-188	216-241							
PMOV1_CDMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN	335-372								
PMOV1_ONSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	137-172								
PMOV1_PMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	48-74								
PMOV1_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	35-50	178-201							
PMOV1_TMVCO	MOVEMENT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COMPEA)	116-201	186-201							
PMTC1_CMVI	MODIFICATION METHYLASE CVIBI	CHLORELLA VIRUS NC-1A	68-107	136-171							
PMTC1_CMVI1	MODIFICATION METHYLASE CVIAII	PARAMECIUM BURSARIA CHLORELLA VIRUS 1 (	126-136								
PMTC1_CMVI1	MODIFICATION METHYLASE CVIBIII	CHLORELLA VIRUS NC-1A	72-94								
PMTB1_AVILE	P33/G4/GAG-MYB-ETS TRANSFORMING PROTEIN (	AVIAN LEUKEMIA VIRUS E26	177-193	265-286							
PMTB_AVIMB	MYB TRANSFORMING PROTEIN	AVIAN MYELOBLASTOSIS VIRUS	104-124								
PNCA2_ADNOV	NUCLEOCAPSID PROTEIN	AD0 VIRUS	218-238	301-326							
PNCA2_BUNLC	NUCLEOCAPSID PROTEIN	BUNYAVIRUS LA CROSSE	136-161								
PNCA2_BUNSH	NUCLEOCAPSID PROTEIN	BUNYAVIRUS SHOWSHOE HARE	84-99								
PNCA2_CDVO	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	84-99								
PNCA2_FIPV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	11-30								
PNCA2_HANTV	NUCLEOCAPSID PROTEIN	HANTAAN VIRUS (STRAIN 76-118)	33-74								
PNCA2_MLVAV	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE AC280)	137-162								
PNCA2_RINV	NUCLEOCAPSID PROTEIN	INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS (STRAIN ROUND BUT	428-446								
			116-137	238-261							

BAD ORIGINAL

FCCLIST		All Viruses (No Bacteriophage)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PNCAP_MSV	NUCLEOCAPSID PROTEIN	IMPATIENS NECROTIC SPOT VIRUS	135-179							
PNCAP_MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	40-59							
PNCAP_MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	40-59							
PNCAP_MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	40-59							
PNCAP_MUMPH	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	136-178							
PNCAP_PHV	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN HIKAJIARA VACCINE)	136-178							
PNCAP_PHHC	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	36-58	218-236	236-277	121-346				
PNCAP_PHHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	42-58	86-102						
PNCAP_PIB	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1935)	42-58	86-102						
PNCAP_PIBH	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	163-184							
PNCAP_PIUDH	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	163-184							
PNCAP_PUUMH	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN HALLNAS B1)	16-58	121-346						
PNCAP_RAVVA	NUCLEOCAPSID PROTEIN	PUUMALA VIRUS (STRAIN SOTKAMO)	16-58	218-236	121-346					
PNCAP_RAVVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	38-58							
PNCAP_RAVVS	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	299-322							
PNCAP_RVVVZ	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	299-322							
PNCAP_SEHDS	NUCLEOCAPSID PROTEIN	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	118-140							
PNCAP_SENDH	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	29-51	86-102						
PNCAP_SENDM	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	43-58	86-102						
PNCAP_SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	43-58	86-102						
PNCAP_SEOUS	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	29-51	86-102						
PNCAP_SFSV	NUCLEOCAPSID PROTEIN	SEOUL VIRUS (STRAIN SR-11)	112-138	217-247						
PNCAP_TACV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	118-140							
PNCAP_UUK	NUCLEOCAPSID PROTEIN	TACAIBE VIRUS	118-141							
PNCAP_VHSVO	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	167-189							
PNCAP_VHSVX1	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	240-266							
PNCAP_VSVXO	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MAKA11)	240-266							
PNCAP_VSVSI	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OC	64-80							
PNEP_AYSBO	NEGATIVE FACTOR									
PNEP_AYSIT	NEGATIVE FACTOR	HUMAN PARAINODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	116-129							
PNRAM_LABDA	NEURAMINIDASE	HUMAN PARAINODEFICIENCY VIRUS TYPE 2 (ISOLATE SI)	106-128							
PNRAM_LACHB	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/78)	2-39							
PNRAM_LADAI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	2-34							
PNRAM_LADCK	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/35/76)	2-34							
PNRAM_LADFW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	2-39							
PNRAM_LAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	2-39	101-117						
PNRAM_LAHKI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/1/KY/1/81)	299-315							
PNRAM_LAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	2-39							
PNRAM_LALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KIEV/35/79)	2-34							
PNRAM_LAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/1)	2-34							
PNRAM_LAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LIMPHIS/7/1111-A/PR11.1-A/PR11/43N)	2-10							
PNRAM_LAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	2-10							
PNRAM_LARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	2-10							
PNRAM_LASHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/86)	2-39							
PNRAM_LATKA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	2-39							
PNRAM_LAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7/81)	2-34	36-77						
PNRAM_LAWSN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/TERN/AUSTRALIA/G70C/75)	2-39							
PNRAM_LAWSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	2-34							
PNRAM_LAWSL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILDEMAINE/1/84)	2-39							
PNRAM_LBORE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN A/WILSON-SMITH/33)	2-30							
PNRAM_LBRTK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	2-20							
PNRAM_LBSLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	2-20							
PNRAM_LBSLR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEE/40)	2-20							
PNRAM_LBSMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)	2-20							
PNRAM_LBSMZ	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	2-20							
PNRAM_LBSOA	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/1/71)	2-20							
PNRAM_LBSOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/OREGON/1/80)	2-20							

BAD ORIGINAL

PGENE	PFUNCTION	All Viruses (No Bacteriophage)									
FLUA_BAEHF	REGION	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PMYXM_INBSI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	1-20								
PMYXM_INBUS	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/USSR/100/83)	1-20								
PMYXM_INBVI	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	1-20								
PNS1_SDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSO	BOMBYX DENSONUCLEOSIS VIRUS	115-151								
PNS1_SDEV	PROBABLE STRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	2-24	196-221	281-306						
PNS1_SDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSO	BOMBYX DENSONUCLEOSIS VIRUS	60-78								
PNS3_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNHIMAR-01)	80-101	431-455							
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	TOMATO SPOTTED WILT VIRUS (STRAIN LI)	80-101	436-458							
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	20-45	387-407							
PNTP1_VAAV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	20-45	387-407							
PP10D_RSVAU	MAJOR ANTIGENIC STRUCTURAL PROTEIN	VARIOLA VIRUS	101-116								
PPAP1_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	199-209								
PPAP1_MYXVA	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	182-204	350-370	424-444						
PPAP1_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	MYXOMA VIRUS (ISOLATE AUSTRALIA/ANTERO/1969)	78-100								
PPAP1_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	101-116								
PPAP1_VAAV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	101-116								
PPCNA_MPVAC	PROLIFERATING CELL NUCLEAR ANTIGEN	VARIOLA VIRUS	101-116								
PPE3_MPVOP	31.3 KD PROTEIN IN PE-3 REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	171-195								
PPE3_MPVAC	31.1 KD PROTEIN IN PE-26 INTERGENIC REGION	ORGYIA PSEUDOTSUGATA NUCLEAR POLYHEDROSIS VIRUS	61-89	221-244							
PPE3_MPVAC	MAJOR DODECAHEDRAL EARLY PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	117-139								
PPEN1_ADE03	PENTON PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	33-51								
PPEN1_ADE03	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 3	171-195								
PPEN1_ADE2X	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 2	171-195								
PPEN1_ADEGX	PENTON PROTEIN	AVIAN ADENOVIRUS GAL16 (STRAIN SA2)	194-214	107-124							
PPE3J_MPVAC	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 7	117-139								
PPIV2_ADEMI	MATURATION PROTEIN	MOUSE ADENOVIRUS TYPE 1	417-431								
PPOL1_BAYMG	GENOME POLYPROTEIN	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	409-428								
PPOL1_BAYMJ	GENOME POLYPROTEIN	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	335-355	611-634	688-1110						
PPOL1_OCHV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHRONIC MOSAIC VIRUS	335-355	611-634	688-1109						
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	691-717	1040-1063	1116-1141						
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	180-196	537-560	565-588	1079-1098	1149-1171	1341-1356	1761-1785	1821-1838	3070-3044
PPOL1_AJUV	RNA1 POLYPROTEIN	ARABIS MOSAIC VIRUS	1132-1159								
PPOL2_BAYMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	135-150	241-264	196-167						
PPOL2_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	135-150	463-485							
PPOL2_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	135-150	463-485							
PPOL2_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)	108-839	1021-1045							
PPOL2_TSVA	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	423-446	541-557	836-876	1201-1221					
PPOL2_BVDVE	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-3)	116-140	431-441	1317-1334						
PPOL2_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	1833-1859								
PPOL2_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	627-651	943-963	1119-1134	1332-1397	1361-1387	1868-1892	2460-2487	2808-2828	2885-2890
PPOLO_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	1141-1161	1326-1341	1836-1871	1947-1966					
PPOLO_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (ECHO 9 VIRUS)	627-651	943-963	1119-1134	1138-1161	1189-1205	1282-1297	1363-1387	1778-1802	2170-2197
PPOLO_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	2318-2338	3241-2266	2393-2408	2766-2781					
PPOLO_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	850-867								
PPOLO_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	21-42								
PPOLO_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	1491-1517	1801-1826							
PPOLO_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	1472-1498	1582-1607							
PPOLO_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	228-255	1475-1501	1585-1610						
PPOLO_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	821-846	1451-1499	1583-1608						
PPOLO_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M1)	1475-1501	1585-1610							
PPOLO_DEN2S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	918-943	1111-1136	1211-1236	1741-1760	1813-1838	2222-2248	2568-2585	2601-2626	1050-3069
PPOLO_DEN3T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN H87)	918-944	1112-1139	1244-1261	1283-1301	1813-1839	2293-2318	2347-2364	2401-2425	
PPOLO_DEN3T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (ISOLATE PHILIPPINES/80)	1760-1776								
PPOLO_DEN3D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN 16681-PDK53)	840-864	918-944	1112-1139	1244-1261	1283-1301	1776-1796	1813-1839	2293-2318	2347-2364
PPOLO_DEN3D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3 (STRAIN D1-84)	1401-1425	2160-2726							
			840-864	918-944							

BAD ORIGINAL

PGCGNL	P1SCTL2IP	AR Viruses (No Bacteriophages)											
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10	AREA11
PDLO_DENJ1	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	2788:3326	918:944	1117:1179	1244:1301	1336:1396	1611:1629	2000:2018	2147:2164	2402:2421	2784:2801	2807:2825
PDLO_DEN1N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN NEW GUINEA C)	100:136	731:796	944:991								
PDLO_DEN1P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN PHILIPPINES)	919:944	1112:1139	1244:1261	1285:1301	1336:1396	1611:1629	1790:1813	2784:2801	2402:2421		
PDLO_DEN1T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN TONGA 1974)	2697:2723										
PDLO_DEN1	GENOME POLYPROTEIN	HEMORRHAGIC VIRUS [VIRUS]	879:944	893:959	1117:1179	1244:1301	1336:1396	1611:1629	1790:1813	2784:2801	2402:2421		
PDLO_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	917:944	1210:1239	1244:1301	1611:1629	1790:1813	2784:2801	2402:2421				
PDLO_ECHO	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY	2698:2724	918:944									
PDLO_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1209:1227	1241:1258	1611:1627	2220:2246	2342:2358	2400:2420	2045:2064				
PDLO_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	664:699	714:799									
PDLO_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D MONKEY-TOGENI	223:247	558:578	1194:1215	1650:1667							
PDLO_ENMG1	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D MONKEY-TOGENI	560:580	1120:1141	1196:1217								
PDLO_ENMGO	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D MONKEY-TOGENI	560:580	1120:1141	1196:1217								
PDLO_FMDVT	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 3JA)	560:580										
PDLO_FMDV1	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	491:511										
PDLO_FMDV2	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	121:141	984:1001	1010:1033	1196:1217	1465:1487	1764:1791					
PDLO_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A5)	102:128	984:1001	1010:1033	1196:1211	1465:1487	1764:1790					
PDLO_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	121:140	984:1001	1010:1033	1196:1211	1465:1487	1764:1790					
PDLO_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND OIUBS1E	121:141	984:1001	1010:1033	1196:1211	1465:1487	1764:1790					
PDLO_FMDVT	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1-SANTA PAU (C-SB))	301:320										
PDLO_HCV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN C1)	121:141	919:998	1141:1159	681:699	833:853	2327:2347	2402:2457	2837:2859	3007:3025	3011:3030	3787:3782
PDLO_HCVA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	112:133	141:169	619:640	681:699	833:853	2327:2347	2402:2457	2837:2859	3007:3025	3011:3030	3787:3782
PDLO_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	102:128	1143:1163	1282:1301	1718:1802	2326:2307	2518:2538	2331:2353	2837:2859	3007:3025	3011:3030	3787:3782
PDLO_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN DRESCIA)	1837:1893	1142:1163	1282:1301	1718:1802	2326:2307	2518:2538	2331:2353	2837:2859	3007:3025	3011:3030	3787:3782
PDLO_HCV3K	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	102:128	1142:1163	1282:1301	1718:1802	2326:2307	2518:2538	2331:2353	2837:2859	3007:3025	3011:3030	3787:3782
PDLO_HCVEI	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC1)	112:133	141:169	619:640	681:699	2223:2247	2441:2456	2816:2838	2988:3007			
PDLO_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H)	21:53										
PDLO_HCVH4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476)	112:133	141:169	619:640	681:699	833:853	2402:2457	2837:2859				
PDLO_HCVH1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT27)	112:133	141:169									
PDLO_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCT18)	1541										
PDLO_HCVJK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-K1)	2753										
PDLO_HCVJ1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J1)	112:133	141:169									
PDLO_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	112:133	141:169	619:640	681:699	833:853	2402:2457	2837:2859				
PDLO_HCVJ6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6)	112:133	141:169	623:644	681:701	837:861	2327:2347	2839:2881	3011:3030			
PDLO_HCVJ	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J)	112:133	141:169	623:644	681:701	837:861	2327:2347	2839:2881	3011:3030			
PDLO_HCVJ1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J1)	141:169	623:644	681:701	837:861	1027:1053	2327:2347	2839:2881	3011:3030			
PDLO_HCVJ8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8)	141:169	623:644	681:701	837:861	1027:1053	2327:2347	2839:2881	3011:3030			
PDLO_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JA)	112:133	141:169	623:644	681:701	837:861	1172:1188	1823:1835	1859:2881	3011:3030		
PDLO_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT)	112:133	141:169	619:640	681:699	833:853	861:880	2327:2347	2839:2881	3011:3030		
PDLO_HCVTH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-T1)	112:133	141:169	619:640	681:699	833:853	2327:2347	2441:2456	2816:2838	2988:3007		
PDLO_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TH)	21:53										
PDLO_HDAV1	GENOME POLYPROTEIN	HEPATITIS A VIRUS (ISOLATE TAIWAN)	112:133	141:169	619:640	681:699	833:853	2327:2347	2441:2456	2816:2838	2988:3007		
PDLO_HDAV3	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	101:123										
PDLO_HDAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	401:418	799:819	1195:1210	1687:1708	2008:2033	2068:2092					
PDLO_HDAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN CR326)	799:819	1195:1210	1687:1708	2008:2033	2068:2092						
PDLO_HDAVC	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GBM)	799:819	1195:1210	1687:1708	2008:2033	2068:2092						
PDLO_HDAVD	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GBM)	799:819										
PDLO_HDAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN GBM)	376:396										
PDLO_HDAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	799:819	1195:1210	1681:1709	2009:2034	2069:2091						
PDLO_HDAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	799:819	1195:1210	1681:1709	2009:2034	2069:2091						
PDLO_HDAVS	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	799:819	1195:1210	1681:1709	2009:2034	2069:2091						
PDLO_HDAVS	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	799:819	1195:1210	1681:1709	2009:2034	2069:2091						
PDLO_HDVI	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	1799:1814	1650:1711	2012:2033	2072:2096							
PDLO_HRVI	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1383:1408	1967:1982									
PDLO_HRVIA	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1A (HRV-1A)	361:379	547:562									
PDLO_HRVIB	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	384:404	572:591	159:176	1029:1052	1431:1458	1825:1841	1816:1842	1941:1961			
PDLO_HRVI	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	369:386	694:713	1027:1045	1446:1469	1818:1838	1809:1833	1841:1864				
PDLO_HRVI9	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	376:391	1038:1061	1229:1251	1733:1758	1460:1481	1632:1648	1823:1849	1948:1968			

BAD ORIGINAL

PCGENE	PIRCLUP	All Viruses (No Bacteriophage)										
FILE NAME	PROTEIN	VIRUS										
PIR0_IBMVP	(HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN BCP/	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN BCP/										
PIR0_IBDVO	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN GUI										
PIR0_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	918-963	1306-1335	1642-1658	2245-2276	2336-2351	2462-2481				
PIR0_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	918-963	1306-1335	1642-1658	2245-2276	2336-2351	2462-2481				
PIR0_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN JAOARS982)	918-963	1306-1335	1642-1658	2245-2276	2336-2351	2462-2481				
PIR0_KUNJA	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	866-891	1314-1351								
		KUNJIN VIRUS (STRAIN MRM61C)	901-936	1314-1351	1643-1659	2246-2271	2337-2352	2465-2480	2603-2640	2641-2678		
PIR0_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	2790-2814									
			67-89	527-551	736-756	2311-2362	1155-1178	1519-1544	1610-1653	2158-2197	2310-2357	
PIR0_LANVY	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	67-89	2424-2451	2766-2784							
PIR0_LIV	GENOME POLYPROTEIN	LOUPING ILL VIRUS (LI)	67-89	527-551	835-862							
PIR0_LIVSB	GENOME POLYPROTEIN	LOUPING ILL VIRUS (STRAIN SB 326)	67-89	527-551								
PIR0_MOJA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	247-271									
PIR0_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS	120-133	1174-1189	1402-1428	1788-1801	1872-1887	2012-2029	2210-2237			
PIR0_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	39-56									
PIR0_OMV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	331-347	563-578	933-962	2305-2324	2521-2548	2585-2602	2641-2657			
PIR0_PEMVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE)	90-110	111-126	678-696	898-914						
PIR0_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	690-717	826-846	1096-1036	1301-1318	1435-1482	1484-1500	1616-1697	1931-1945	2003-2022	
PIR0_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	1409-1432									
PIR0_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN LANSING)	1410-1433									
PIR0_POLIW	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN W-2)	1408-1431									
PIR0_POLI1	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN 37117)	1408-1431									
PIR0_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAINS F. BRENDT AND PFLEUR 13A(TD)	337-354	1407-1410								
PIR0_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D)	517-534	1407-1410								
PIR0_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR)	133-178	531-551	714-741	1078-1115	1468-1495	1497-1515	2606-2624	1084-1106		
PIR0_PPVMA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE MA)	901-999	1401-1483								
PIR0_PPVA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	133-178	733-760	1097-1114	1481-1494	1496-1512	2605-2621	1068-1090			
PIR0_PPVH	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P7 MUTANT HA)	133-178	733-760	1097-1114	1481-1494	1496-1512	2605-2621	1081-1105			
PIR0_PRVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P7 MUTANT HA 5-1)	232-290									
PIR0_PRVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	161-181									
PIR0_PSMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DP10)	161-181									
PIR0_PVYC	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN C)	47-62	231-268	139-157	614-631	981-1001	1411-1438	1565-1592	2701-2726		
PIR0_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	735-776	964-982	1010-1036	1109-1125	1456-1481	1485-1501	1637-1698	1922-1946	2588-2606	
PIR0_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	1004-1026									
PIR0_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	735-776	964-982	1010-1036	1109-1125	1456-1481	1485-1501	1637-1698	1922-1946	2590-2608	
PIR0_PTVI	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	591-616	1326-1351	1826-1851	1903-1924	2611-2642	2702-2729	2764-2783			
PIR0_SHVM	GENOME POLYPROTEIN	ST LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	1301-1324									
PIR0_SVDVM	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	39-56									
PIR0_SVDVU	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG/76)	1475-1501	1585-1610								
PIR0_TBEVI	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN UKG/372)	1475-1501	1585-1610								
PIR0_TBEVW	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN)	67-89	527-551	1361-1378	1519-1544	1610-1653	1740-1761	2210-2257	2366-2383	2765-2781	
PIR0_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (TEV)	327-353	933-960	1016-1042	1114-1130	1307-1324	1490-1506	2166-2184			
PIR0_TMEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN 8386)	924-941	1074-1093	1119-1140	1320-1346	1658-1677					
PIR0_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1072-1093	1117-1138	1318-1344	1636-1675						
PIR0_TUMV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	845-870	924-941	1074-1095	1119-1140	1320-1346	1658-1677				
PIR0_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	22-39	970-991	1138-1156	1532-1549						
PIR0_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	404-428	497-517	660-687	850-866	963-992	1735-1774	2337-2362			
PIR0_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	188-218									
PIR0_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	537-552	931-956	1101-1122	1619-1655	1748-1767	2324-2349	2437-2457	2638-2655	2795-2817	
PIR0_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN FRENCH NEUROTROPIC)	74-95	1157-1179	1228-1248	1385-1405	1495-1511	1623-1641	1761-1778	2329-2348		
PIR0_YEFV8	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	74-95	1157-1179	1228-1248	1385-1405	1495-1511	1623-1641	1761-1778	2329-2348		
PIR0_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	74-95									
PIR0_EEVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DON)	96-107	1410-1433	1315-1344	611-634	1001-1018	1155-1178	1931-1950	2329-2344	2701-2721	

BAD ORIGINAL

FCGUNL	FUNCTION	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PFOLN_FCVPR	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN FCV-F9)	443-469	748-766	902-923	1069-1088					
PFOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4)	100-126								
PFOLN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	171-186	367-387	916-945	1224-1247	1378-1399	1545-1564			
PFOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	230-264	1334-1391							
PFOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	230-264	1334-1389							
PFOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	230-264	1334-1391							
PFOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	230-264	1334-1391							
PFOLN_MIDDV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	349-365	628-643	700-720						
PFOLN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	486-512	628-643	700-720						
PFOLN_RUBDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	90-107	613-634	2148-2163	2220-2240					
PFOLN_RUBDV1	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351)	136-180	330-352	775-920	1116-1151	1459-1475	1631-1649			
PFOLN_RAVN	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB1092)	115-133								
PFOLN_RAVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	89-106	611-632	2115-2138	2185-2201					
PFOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN TO.RIEN)	782-797	834-874							
PFOLN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	14-37	91-113	763-779	930-946	1124-1141	1285-1302			
PFOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO/STRAIN EDSDYN 82-5)	91-108	617-643	2062-2077	2134-2154					
PFOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1131-1150	1131-1150	1131-1150	1131-1150					
PFOLN_EPMV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	620-646	620-646	1124-1143	1190-1207	2146-2161	2218-2238			
PFOLN_OYMV	RNA REPLICASE POLYPROTEIN	ONONIS YELLOW MOSAIC VIRUS	808-833								
PFOLN_TYMV	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS	707-727	941-963							
PFOLN_TYMVA	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	212-233	816-835	1117-1137						
PFOLN_TYMVC	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (ISOLATE TYMC)	212-233	816-835	1117-1137						
PFOLI_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	33-50	213-229	491-507						
PFOLI_EEVV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	33-50	214-230	492-508						
PFOLI_EEVVI	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	33-48	229-245	504-522						
PFOLI_IBDVI	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DON	33-48	229-245	504-522						
PFOLI_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70)	900-922								
PFOLI_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN C	900-922								
PFOLI_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	900-922								
PFOLI_ONNVG	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PING-90)	881-903								
PFOLI_RAVT	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	900-922								
PFOLI_RUBVH	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	488-508								
PFOLI_RUBVH	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	33-52	1716-1743							
PFOLI_RUBVM	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	211-701								
PFOLI_RUBVM	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN M33)	210-701								
PFOLI_RUBVA	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	211-701								
PFOLI_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN TIERIEN	211-701	1041-1060							
PFOLI_SFV	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	33-59	730-801							
PFOLI_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO/STRAIN EDSDYN 82-5)	33-52	731-773							
PFOLI_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRL2)	33-52								
PFOLI_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	33-52								
PFOL_AVDE	POL POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	36-51	909-933							
PFOL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	330-361								
PFOL_BIVDE	POL POLYPROTEIN	BOVINE DIARRHOEA VIRUS (ISOLATE 106)	326-344	973-993	999-1019	1070-1091					
PFOL_BIVJ1	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	101-119	742-760	868-889						
PFOL_BLVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	101-119	742-760	868-889						
PFOL_BLVJ	POL POLYPROTEIN (REVERSE TRANSCRIPTASE	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	487-504								
PFOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	191-419	636-671		672-691					
PFOL_CAMVC	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	184-204	380-407	471-494						
PFOL_CAMVD	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	175-199	373-402	466-489						
PFOL_CAMVE	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	184-204	380-407	471-494						
PFOL_CAMVN	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	76-97	185-205	281-301						
PFOL_CAMVS	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	184-204	380-407	471-494						
PFOL_CEV	ENZYMATIC POLYPROTEIN	CARNATION ETCHED RING VIRUS	161-184	435-478							
PFOL_COYMV	PUTATIVE POLYPROTEIN	COMMELINA YELLOW MOTTLE VIRUS	320-343	1216-1311	1606-1622	1641-1665					
PFOL_EIAVP	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1169)	437-456								
PFOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	437-456								

BAD ORIGINAL

PCGENE	P1:CTLZIP	All Viruses (No Bacteriophage)	AREA1	AREA2	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
ELEMBASE	PROTEIN	VIRUS								
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	416-455							
PPOL_FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS (CEE)	181-401	836-876						
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	407-426	733-775						
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	407-426	733-775						
PPOL_FIVT1	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	406-425	663-690	735-775	1041-1060				
PPOL_FMVD	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DRS)	191-212	464-487						
PPOL_FOAMV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS	126-147	768-788						
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	19-40	971-991	1041-1071					
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	330-346							
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	330-346							
PPOL_HTLV2	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	609-627							
PPOL_HTVIA2	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	860-887							
PPOL_HV1B1	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (BH10 ISOLATE)	833-860	872-899						
PPOL_HV1B3	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (BH8 ISOLATE)	872-899							
PPOL_HV1BR	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (BRU ISOLATE)	872-899							
PPOL_HV1EL	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (ELI ISOLATE)	622-647							
PPOL_HV1HA	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (HXB2 ISOLATE)	860-887	859-886						
PPOL_HV1JR	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (JRCSF ISOLATE)	864-891							
PPOL_HV1MA	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (MAL ISOLATE)	859-886							
PPOL_HV1N5	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (NDK ISOLATE)	633-648	860-887						
PPOL_HV1OY	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (OYI ISOLATE)	622-647	859-886						
PPOL_HV1PV	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (PV2 ISOLATE)	860-887							
PPOL_HV1RH	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (RF/HAT ISOLATE)	633-660	872-899						
PPOL_HV1U4	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (STRAIN UGANDAN 1150	859-886							
PPOL_HV1Z2	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 1 (Z2/ZOC-2.14 ISOLATE)	622-647	859-886						
PPOL_HV2BE	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 2 (ISOLATE BEN)	379-406	907-934						
PPOL_HV2CA	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 2 (ISOLATE CAM2)	886-913							
PPOL_HV2D1	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 2 (ISOLATE D194)	397-424	925-952						
PPOL_HV2D2	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 2 (ISOLATE D205.7)	907-934							
PPOL_HV2G1	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 2 (ISOLATE GHANA-1)	359-386	887-914						
PPOL_HV2N2	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 2 (ISOLATE NIH-Z)	503-564	731-792	881-914					
PPOL_HV2RO	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 2 (ISOLATE ROD)	886-913							
PPOL_HV2S1	POL POLYPROTEIN	HUMAN RETROPROTEIN VIRUS TYPE 2 (ISOLATE SBL/ISY)	359-386	887-907						
PPOL_DHA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	379-406	907-934						
PPOL_DMAJ	PUTATIVE POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	186-190	198-225	460-477					
PPOL_JSRV	PROBABLE POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RET	133-301	209-236	506-533	531-558	765-789			
PPOL_MCFFJ	POL POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI	102-120	128-155	407-433	433-462				
PPOL_MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	186-213	907-936	660-679					
PPOL_MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	31-53							
PPOL_MLVCB	POL POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	611-631	738-764						
PPOL_MLVFS	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS	315-334	978-998	1004-1024	1081-1099				
PPOL_MLVFT	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	64-84	90-110	167-183					
PPOL_MLVGP	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	340-359	983-1001	1009-1029	1086-1102				
PPOL_MLVMO	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	340-359	983-1001	1009-1029	1086-1102				
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	315-334	978-998	1009-1029	1086-1102				
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	315-334	978-998	1004-1024	1081-1099				
PPOL_MMTVB	POL POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	163-183	189-209	466-482					
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	196-219	733-751						
PPOL_OMVVS	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	745-765							
PPOL_RSVP	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	169-195	407-448	612-647	1043-1063				
PPOL_RTBV	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	719-742							
PPOL_RTBVP	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	881-915	1018-1061						

BAD ORIGINAL

PCGENE	P1:CTL2P	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPOL_SFVI	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	188-204	335-356	845-869	974-994					
PPOL_SFVL	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1) STRAIN LK1)	186-206	333-358	847-871	978-998					
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	695-913								
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM1 ISOLATE)	711-726	709-910							
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM/CLONE GM-1)	699-916								
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	726-741	911-913							
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	866-911								
PPOL_SIVMI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MNE02-81 ISOLATE)	680-695	869-876							
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ROW ISOLATE)	680-697	908-915							
PPOL_SIVSI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236SMM ISOLATE)	700-717	906-911							
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ6SMM ISOLATE)	847-870								
PPOL_SMRVH	POL POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS	744-761	874-901							
PPOL_SRSVC	POL POLYPROTEIN	SIMIAN SARCOMA VIRUS	106-120								
PPOL_SOCMV	ENZYMATIC POLYPROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	130-153	177-205							
PPOL_SRVI	POL POLYPROTEIN	SIMIAN RETROVIRUS	745-763								
PPOL_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	488-507	631-666	971-991						
PPOL_VILVI	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	488-507	631-666	971-991						
PPOL_VILVS	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K52)	488-507	631-666	971-991						
PPP11_HCMVA	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	133-111	181-210							
PPP41_HSVGD	38 KD STRUCTURAL PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-141								
PPP65_HCMVA	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN GS)	135-175	196-411							
PPP67_HCMVT	65 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	111-133								
PPP71_HCMVA	64 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	101-133								
PPR33_MMTVB	71 KD UPPER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	488-507								
PPR73_MMTVB	PROTEIN P33	MOUSE MAMMARY TUMOR VIRUS (STRAIN RIII)	78-102								
PPR73_MMTVG	PROTEIN P73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61								
PPR78_MMTVG	PROTEIN P78	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61								
PRASH_MSVMA	TRANSFORMING PROTEINS P21 AND P19	HARVEY MURINE SARCOMA VIRUS (STRAIN GR)	40-61								
PRASH_RSASV	TRANSFORMING PROTEINS P21 AND P19	RASTICED RAT SARCOMA VIRUS	44-65								
PREP_CSV	REPEAT ELEMENT PROTEIN	CAMPOLETIS SONORENSIS VIRUS	58-80								
PRER_VACCV	RIFAMPICIN RESISTANCE PROTEIN	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	14-36								
PRER_VARV	RIFAMPICIN RESISTANCE PROTEIN	VARIOLA VIRUS	274-298	316-335	517-535						
PREV_SIVGB	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM) ISOLATE)	274-298	316-335	517-535						
PREV_SIVGB	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	2-17								
PRI1_ASFKU	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	45-72								
PRI1_EBV	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	139-164	189-210	491-510						
PRI1_HCMVA	RIBONUCLEOTIDE REDUCTASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	793-812								
PRI1_HSV11	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	193-213	669-684							
PRI1_HSVEB	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	415-430	537-613							
PRI1_HSVSA	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	60-85	246-288	668-694						
PRI1_VACCC	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-151								
PRI1_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	36-51								
PRI1_VARV	RIBONUCLEOTIDE REDUCTASE	VARIOLA VIRUS	36-51								
PRI1_VZVD	RIBONUCLEOTIDE REDUCTASE	VARICELLA-ZOSTER VIRUS (STRAIN HUMAN)	34-58	221-247	258-280						
PRI1_EBV	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	209-234								
PRI1_HSV11	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	44-66	235-282							
PRI1_HSV1K	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	41-63	240-261	274-291						
PRI1_HSV2I	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	41-63	232-289							
PRI1_HSV8E	RIBONUCLEOTIDE REDUCTASE	BOVINE HERPESVIRUS 1 TYPE 1 (STRAIN 1K)	41-63								
PRI2_HSVEB	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	244-266								
PRI2_HSVSA	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	61-88	251-273							
PRI2_SFVKA	RIBONUCLEOTIDE REDUCTASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	212-239								
PRI2_VACCC	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	184-206	315-337							
PRI2_VACCP	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN LIVP	184-206								
PRI2_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	184-206								

BAD ORIGINAL

BAD ORIGINAL

PCGENE	P1CTCLZIP	All Viruses (No Bacteriophage)									
LUCKAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PROT_IAJW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	334-557								
PROT_IAJUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	334-557								
PROT_IAJUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/BUDDY TURNSTONE/NEW JERSEY/87)	334-557								
PROT_IAJSN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	334-557								
PROT_IATKW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	334-557								
PROT_IAJWL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	334-557								
PROT_IAJHG	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/30)	68-86	334-557							
PROT_IAJHJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/81/78)	334-557								
PROT_IAJII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/12/81)	334-557								
PROT_IAJTF	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	334-557								
PROT_IAJAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	334-557								
PROT_IAJAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	33-54								
PROT_IAJAJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	33-54								
PROT_IAJCJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA C VIRUS (STRAIN C/JJ/50)	33-54								
PROT_IAJAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	406-425								
PROT_IAJUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/7/77)	319-334	342-360							
PROT_IAJCH	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	319-334	342-360							
PROT_IAJTX	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	319-334	342-360							
PROT_IAJQI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	319-334	342-360							
PROT_IAJGA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	319-334	342-360							
PROT_IAJEK	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/2/78)	319-334	342-360							
PROT_IAJEQ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/75/86)	319-334	342-360							
PROT_IAJEX	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	319-334	342-360							
PROT_IAJEP	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	319-334	342-360							
PROT_IAJKR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	342-360								
PROT_IAJLE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	319-334	342-360							
PROT_IAJLE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	319-334	342-360							
PROT_IAJLE3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/135/57)	319-334	342-360							
PROT_IAJAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/191/57)	319-334	342-360							
PROT_IAJAE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	319-334	342-360							
PROT_IAJN6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	319-334	342-360							
PROT_IAJVE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	319-334	342-360							
PROT_IAJUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/65)	319-334	342-360							
PROT_IAJSE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	319-334	342-360							
PROT_IAJSN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	319-334	342-360							
PROT_IAJTKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	319-334	342-360							
PROT_IAJVT	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	319-334	342-360							
PROT_IAJWL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	319-334	342-360							
PROT_IAJII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	319-334	342-360							
PROT_IAJTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	319-334	342-360							
PROT_IAJAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	31-86	335-361							
PROT_IAJOE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	31-86	335-361							
PROT_IAJCJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA C VIRUS (STRAIN C/PIG/1/81)	74-90	332-371							
PROT_THOOV	RNA-DIRECTED RNA POL SUBUNIT P3	THOGOTO VIRUS	74-90	332-371							
PROA_CVH22	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	35-101								
PROA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE HEPATITIS VIRUS (STRAIN DEFECTIVE JHM)	82-104	410-436	831-878	1402-1507	1521-1562	1543-1588	2115-2149	2974-3002	3537-3559
PROA_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	410-467								
			917-938	1188-1215	1318-1334	1432-1449	1461-1480	1567-1585	1781-1806	2165-2192	3537-3554
PRPB_BEV	RNA-DIRECTED RNA POLYMERASE	BERVE VIRUS	2570-2604	2665-2696	3044-3061	3228-3245	3605-3623	3933-3954			
PRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	406-432	1308-1337	1518-1537	2137-2154					
PRPB_CVMJH	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	393-412	1302-1324	1815-1830	2698-2715					
PRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	335-412	346-370	1102-1124	1835-1848	2696-2721				
PRPB_CVPH1	RNA-DIRECTED RNA POLYMERASE	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM/1/7004 / BRITISH1)	177-200	402-508							
PRPB_DEVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	80-106								
PRPL_BTV10	RNA-DIRECTED RNA POLYMERASE	BLUETONGUE VIRUS (SEROTYPE 10 ISOLATE USA)	160-184	338-365	887-911	1335-1352	1654-1674				
			21-41	146-161							

BAD ORIGINAL

PGENE	PTICTLIP	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS										
PRJPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	78-104	101-324	440-465	1096-1110	1312-1328					
PRJPL_EBOV	RNA-DIRECTED RNA POLYMERASE	EBOLA VIRUS	16-31									
PRJPL_MARTV	RNA POLYMERASE	MARTAAN VIRUS (STRAIN 76-111)	151-168	173-184	196-211	1561-1575	2081-2101					
PRJPL_MSIV	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	5-19									
PRJPL_MSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	5-19	1181-1208	1425-1447	1615-1635	1929-1941	2018-2031				
PRJPL_MARVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	15-30	144-169	225-248	111-241	471-492	546-569	911-946	1042-1067	1410-1436	
PRJPL_MARVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	1711-1731	1990-2017	2031-2054	471-492	546-569	911-946	1042-1067	1410-1436	1677-1696	
PRJPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	15-30	144-169	225-248	1031-1054	1225-1246					
PRJPL_MUMPH	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	1715-1731	1805-1822	1990-2017	1160-1185	1379-1404	1970-1990	2028-2043			
PRJPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	15-31	617-632	1090-1111	1965-1980	1100-1124	1132-1153	1601-1622	2118-2143		
PRJPL_PIIH1	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA)	43-66	1351-1372	1967-1984	2040-2067						
PRJPL_PIIH2	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN NIH 47885)	704-724	1351-1372	1967-1984	2040-2067						
PRJPL_PUDAD	RNA-DIRECTED RNA POLYMERASE	PUUMALA VIRUS (STRAIN HALLNAS B1)	109-124	168-191	208-234	1109-1135	1362-1388	1981-2010	2115-2134			
PRJPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	172-193	204-230	244-261	885-909	1848-1868	2064-2084	2111-2134			
PRJPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	173-194	596-611	1377-1396	1377-1396	2046-2110					
PRJPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	266-286	342-363	741-763	1440-1461	1492-1513					
PRJPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	10-27	353-369	610-627	1295-1316						
PRJPL_SENDI	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN 2 / HOST MUTANT 5)	182-209	1009-1035	1074-1110							
PRJPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	64-83	104-130	194-218	844-868	885-900	1405-1420	1844-1864	2107-2128		
PRJPL_SEOUR	RNA-DIRECTED RNA POLYMERASE	SENDAI VIRUS (STRAIN Z)	64-83	104-130	194-218	844-881	885-900	1405-1420	1844-1864	2107-2128		
PRJPL_SVSWA	RNA POLYMERASE BETA SUBUNIT	SEOUL VIRUS (STRAIN 80-39)	151-168	173-194	194-219	596-611	1561-1581	2081-2105				
PRJPL_TIWYB	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	43-66	104-124	261-284	1074-1098	1125-1147	1336-1360	1117-2137			
PRJPL_UUK	RNA POLYMERASE	SONCHUS YELLOW NET VIRUS	128-146	391-406	603-627	704-731	863-881	886-911	1484-1510	1778-1792		
PRJPL_VSVIN	RNA POLYMERASE BETA SUBUNIT	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH1/BR-01)	938-954	1381-1410	1778-1800	2609-2627	2678-2702					
PRJPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN 11A)	156-183	312-339	1404-1431	1570-1591	2060-2081					
PRJPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OC)	156-183	312-339	903-931	1934-1961	2060-2087					
PRJPO_ACLSV	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	1936-1962		1916-1942	2080-2101						
PRJPO_BWYVF	PUTATIVE RNA-DIRECTED RNA POL	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	226-247	1016-1034	1137-1155	1775-1791						
PRJPO_BYDVI	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	299-328									
PRJPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	359-386	391-416	503-522							
PRJPO_BYDVR	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	359-386	391-416	503-522							
PRJPO_CARMV	PROBABLE RNA-DIRECTED RNA POL	CARNATION MOTTLE VIRUS	359-386	391-416	503-522							
PRJPO_CGMVS	PUTATIVE RNA-DIRECTED RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN)	4-30	92-107	127-150	818-833						
PRJPO_CNV	PROBABLE RNA-DIRECTED RNA POL	CUCUMBER NECROSIS VIRUS	443-466	534-551	1017-1033	1321-1339						
PRJPO_CRV	PROBABLE RNA-DIRECTED RNA POL	CYMBIDIUM RINGSPOT VIRUS	277-300	365-371	470-494							
PRJPO_DNVI	PUTATIVE RNA-DIRECTED RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	96-111	345-371	470-494							
PRJPO_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	221-238									
PRJPO_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	33-53	397-611	659-681	918-1008	1334-1358	1770-1795	2077-2099			
PRJPO_MCMV	PROBABLE RNA-DIRECTED RNA POL	MAIZE CHLOROTIC MOTTLE VIRUS	33-53									
PRJPO_PEAMV	RNA-DIRECTED RNA POLYMERASE	PEA ENATION MOSAIC VIRUS	16-41	101-127	335-399							
PRJPO_PLAVI	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAFROLL VIRUS (STRAIN 1)	144-161	318-336	431-456	538-574						
PRJPO_PLAVW	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	331-358	578-600								
PRJPO_PPMV3	PUTATIVE RNA-DIRECTED RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	331-358	578-600								
PRJPO_RCMV	PUTATIVE RNA-DIRECTED RNA POL	RED CLOVER NECROTIC MOSAIC VIRUS	275-295	702-716	1069-1096	1491-1507						
PRJPO_REOVI	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN DYOMES)	278-300									
PRJPO_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	141-176									
PRJPO_ROTBA	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	141-176									
PRJPO_ROTBU	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	132-156	247-269	844-861	904-921	942-967	1017-1044				
PRJPO_ROTPC	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	132-156	247-269	844-861	904-921	942-967	1017-1044				
PRJPO_ROTPO	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	198-223	345-374	1118-1137	1368-1384	1856-1878	936-952				
PRJPO_ROTSI	RNA-DIRECTED RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	13-33	112-136	247-269	844-861	904-921	942-967				
PRJPO_SBMV	PROBABLE RNA-DIRECTED RNA POL	SOUTHERN BEAN MOSAIC VIRUS	132-156	247-269	844-861	904-921	942-967	1017-1046				
PRJPO_TACV	RNA POLYMERASE	TACAIBE VIRUS	18-44	122-143	188-206	385-402	444-466	831-847				
			88-107	166-189	1231-1301	1676-1693	2019-2046					

BAD ORIGINAL

PCGENE	FUNCTION	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PRPO_TBVC	PUTATIVE DNA-DIRECTED RNA POL	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	277-500	345-371	470-494					
PRPO_TCV	PUTATIVE DNA-DIRECTED RNA POL	TURNIP CRINKLE VIRUS	111-18	241-263						
PRPO_TMGMV	PUTATIVE DNA-DIRECTED RNA POL	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U1)	109-231	685-1160						
PRPO_TMV	PUTATIVE DNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (VULGARE)	700-724	1090-1105	1387-1610					
PRPO_TMVKO	PUTATIVE DNA-DIRECTED RNA POL	TOBACCO MOSAIC VIRUS (STRAIN KOREAN)	700-724	1090-1105	1387-1610					
PRPO_TMVO	DNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO&L)	700-724	1090-1105	1138-1170	1387-1610				
PRPO_TNVD	DNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A)	113-111							
PRPP_CHAV	DNA POLYMERASE ALPHA SUBUNIT	TOBACCO NECROSIS VIRUS (STRAIN D)	5-26							
PRPP_MIMIV	DNA POLYMERASE ALPHA SUBUNIT	CHANDIPURA VIRUS (STRAIN 1653314)	134-144							
PRPP_MOUSE	DNA POLYMERASE ALPHA SUBUNIT	MOUSE VIRUS (STRAIN SBL-1)	211-238							
PRPP_MUMPN	DNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	212-239							
PRPP_NDV4	DNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	212-239							
PRPP_NDV8	DNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	156-176							
PRPP_PDV	DNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE/45)	156-176							
PRPP_PDVT	DNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS	216-243							
PRPP_PIV4A	DNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TOSHIIIIA)	214-243							
PRPP_PIV4B	DNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	220-247							
PRPP_PIV4V	DNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 461-3))	220-247							
PRPP_RAVA	DNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	134-161							
PRPP_RAVC	DNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	8-32							
PRPP_RAVE	DNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	8-32							
PRPP_RAVP	DNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA, AND (STRAIN PM)	8-32	216-237						
PRPP_RAVS	DNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	8-32	216-237						
PRPP_SV5	DNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	8-32	216-237						
PRPP_VSVO	DNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	8-32	202-301						
P3TA_AUBT	SPHEROIDIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OG	197-223							
P4D5E_VACCC	SUPEROXIDE DISMUTASE LIKE PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	196-218							
P4D5E_VACCV	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-40							
P4D5E_VAVA	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	19-40							
P4H8_VAEEV	SPHEROIDIN	VARIOLA VIRUS	19-40							
P5PH_CHEPV	SPHEROIDIN PRECURSOR	AMSACTA MOORLEI ENTOMOPOXVIRUS	58-79	637-656						
P5PH_MYXVL	SERINE T	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS	117-501							
P5WA_SPVSA	SYNTHASE PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	62-80	217-243						
P7ALA_DIDV	LARGE T ANTIGEN	SWINEPOX VIRUS (STRAIN KASZA)	61-81							
P7ALA_POVBA	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	334-369							
P7ALA_POVBK	LARGE T ANTIGEN	POLYOMA VIRUS BK (STRAIN AS)	202-224	428-444						
P7ALA_POVBO	LARGE T ANTIGEN	POLYOMA VIRUS BK	202-224	429-444						
P7ALA_POVBV	LARGE T ANTIGEN	BOVINE POLYOMA VIRUS	385-400							
P7ALA_POVC	LARGE T ANTIGEN	HAMSTER POLYOMA VIRUS	43-69	349-364						
P7ALA_POVJC	LARGE T ANTIGEN	POLYOMA VIRUS JC	201-223	428-443						
P7ALA_POVLY	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMA VIRUS	43-69	516-542						
P7ALA_POVMA	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN 3)	43-69							
P7ALA_POVMC	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN A2)	374-389							
P7ALA_POVMK	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	371-386							
P7ALA_SV40	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN KILHAM)	173-197	278-304	446-472					
P7ALG_POVHA	MIDDLE T ANTIGEN	SIMIAN VIRUS 40 (SV40)	200-223	437-462						
P7ASM_POVHA	SMALL T ANTIGEN	HAMSTER POLYOMA VIRUS	43-69							
P7ASM_POVLY	SMALL T ANTIGEN	LYMPHOTROPIC POLYOMA VIRUS	43-69							
P7ASM_POVMK	SMALL T ANTIGEN	MOUSE POLYOMA VIRUS	43-69							
P7ATR_MPVAC	TRANS-ACTIVATING TRANS REG PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	43-69	67-89						
P7ATR_MPVBM	TRANS-ACTIVATING TRANS REG PROTEIN	BOMBYX MONI NUCLEAR POLYHEDROSIS VIRUS	406-431							
P7ATR_MPVOP	TRANS-ACTIVATING TRANS REG PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	411-436							
P7AT_BVDS	TRANS-ACTIVATING TRANS REG PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	389-414							
P7AT_BVDT	TRANS-ACTIVATING TRANS REG PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	44-59							
P7AT_HTLIA	TRANS-ACTIVATING TRANS REG PROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	44-59							
P7AT_HTLIC	TRANS-ACTIVATING TRANS REG PROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	192-210							
			192-210							

BAD ORIGINAL

FEGENE	FUNCTION	All Viruses (No Bacteriophage)									
FULL NAME	PROTEIN	VIRUS	AREA 1	AREA 1	AREA 2	AREA?	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5
PTAT_HVIU4	TAT PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISO	1-43								
PTCR_FLV	T-CELL RECEPTOR BETA CHAIN PRECURSOR	FELINE LEUKEMIA VIRUS	6-22	98-111							
PTEGP_HSVEB	PROBABLE TEGUMENT PHOSPHOPROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-118								
PTEGP_HSVEK	TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	101-118								
PTEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	143-166	767-789	814-835	1033-1053	1184-1220	1469-1496	1868-1893	2061-2077	3103-3126
PTEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	342-358	644-668	1061-1077	1307-1322	1323-1345	1419-1444	1909-1936	1952-1974	3199-3221
PTEGU_HSV11	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	12-27	633-644	1732-1759						
PTEGU_HSVGG	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	131-152	345-365	615-636	1021-1043	1308-1328	1562-1579			
PTEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	432-454	359-381	1072-1099	1101-1132	1418-1440	1764-1781	2263-2283		
PTEGU_HSV1A	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	441-491	314-337	988-1008	1121-1137	1155-1174	1177-1193	1501-1525	1667-1622	1898-1915
PTEGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	2431-2459								
			433-456	694-711	711-728	801-823	895-920	1013-1034	1360-1378	1632-1657	1788-1807
PTEAU_ADE2I	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	2008-2029	2176-2197	2694-2711						
PTEAU_ADE2I	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 2	63-80	593-616							
PTEAU_ADE7I	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	63-80	593-616							
PTEAU_ADE5I	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 5	63-80	580-603							
PTOP1_AJFB1	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	44-63	334-350	526-545						
PTOP1_AJFB2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	119-140	688-707							
PTR1E_HCMVA	HYPOTHETICAL PROTEIN TRL1#	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	119-140	685-706							
PTR1E_AVIRE	REL TRANSFORMING PROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	119-135								
PTYMS_VZVD	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	36-74								
PUSK_HSVAU	POSSIBLE GANCICLOVIR KINASE	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	11-29								
PUSK_HSVAU	PROTEIN 3L	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	400-415								
PUSKE_HCVAC	UDP-GLUCOSYLTRANSFERASE PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-23								
PUL03_HCMVA	HYPOTHETICAL PROTEIN UL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	453-477								
PUL03_EBV	HYPOTHETICAL PROTEIN	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	31-49								
PUL04_HCMVA	VIRION PROTEIN BBRF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-31								
PUL06_HCMVA	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	333-348								
PUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	191-208								
PUL06_HSVEB	VIRION GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	404-429								
PUL06_HSV1A	VIRION GENE 41 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	417-441								
PUL07_EBV	BBRF1 PROTEIN	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	44-60								
PUL07_HCMVA	HYPOTHETICAL PROTEIN UL7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137-149								
PUL07_HSV11	PROTEIN UL7	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	88-108	186-209							
PUL07_HSVEB	GENE 35 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	173-200								
PUL07_HSV1A	GENE 40 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	11-32								
PUL07_VZVD	GENE 35 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	44-61								
PUL08_HSV11	PROTEIN UL8	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	338-356	202-224							
PUL08_VZVD	GENE 33 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	314-338	185-216							
PUL09_HSV11	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	228-255	593-616							
PUL09_HSVEB	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	364-384								
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	171-196	613-628							
PUL11_HCMVA	HYPOTHETICAL PROTEIN UL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	68-92	166-190	484-508						
PUL11_HCMVA	HYPOTHETICAL PROTEIN UL11	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	223-247								
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	449-467								
PUL14_HSV11	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	280-299								
PUL15_HSV11	HYPOTHETICAL GENE 48 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	96-116								
PUL15_HSVEB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	100-121								
PUL16_HSV11	PROTEIN UL16	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	12-29								
PUL16_HSVEB	GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	16-43	98-119	324-339						
PUL16_HSV1A	GENE 51 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	69-87	278-295							
PUL16_VZVD	GENE 44 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	63-80	117-133							
PUL17_EBV	PROTEIN BGLF1	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	133-149								
PUL17_HCMVA	HYPOTHETICAL PROTEIN UL17	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-82								
PUL17_HSV11	PROTEIN UL17	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	156-181								
PUL17_HSV1A	GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	94-118	348-370							
PUL19_HCMVA	HYPOTHETICAL PROTEIN UL19	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	61-83								

BAD ORIGINAL

PROGENE	FUNCTION	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PUL26_PAVHO	UL26 HOMOLOGUE PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN MA.)	34-98								
PUL26_VZVD	GENE 26 HOMOLOGUE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	261-334								
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	91-110								
PUL31_HSV11	PROTEIN UL31	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	98-114	116-144							
PUL31_HSVEB	GENE 46 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	98-114	116-144							
PUL31_VZVD	GENE 31 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	115-142	194-221	379-403	413-427					
PUL32_HCMVA	HYPOTHETICAL PROTEIN UL32	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	276-293	300-327							
PUL32_EBV	PROTEIN BXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	44-67								
PUL33_HCMVA	HYPOTHETICAL PROTEIN UL33	EPSTEIN-BARR VIRUS (STRAIN B95-8)	134-153								
PUL33_HSV11	PROTEIN UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	206-222								
PUL34_EBVT	PROTEIN UL34 HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	107-166								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V811)	118-179								
PUL35_HSV11	VIRION PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	416-500								
PUL35_HSV2A	VIRION GENE 19 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	86-101								
PUL35_ILTVT	64 KD VIRION PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	86-104	130-147							
PUL36_ILTVT	PROTEIN UL36 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V811)	244-263	344-368							
PUL37_HCMVA	HYPOTHETICAL PROTEIN UL37	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	176-207	316-336							
PUL39_HCMVA	HYPOTHETICAL PROTEIN UL39	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	307-324	486-507							
PUL39_HCMVA	HYPOTHETICAL PROTEIN UL39	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	238-264								
PUL3_EBV	PROTEIN BFLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	9-32								
PUL3_HCMVA	HYPOTHETICAL PROTEIN UL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	273-296								
PUL3_HSV11	PROTEIN UL3	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	610-637	682-702							
PUL3_HSVEB	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	95-116								
PUL3_VZVD	GENE 29 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	104-125	288-309							
PUL31_HSV11	PROBABLE MAJOR ENV GLYCOPROTEIN UL31	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	145-168	163-190							
PUL31_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	117-138	295-316							
PUL31_VZVD	PROBABLE MAJOR ENV GLYCOPROTEIN 300	EQUINE HERPESVIRUS 1 TYPE 1 (STRAIN AB4P)	121-143	364-385							
PUL32_HCMVA	O-PROTEIN COUPLED LEC HOMOLOG UL32	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	81-108								
PUL34_HCMVA	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	353-374								
PUL34_HSV11	VIRION PROTEIN UL34	HERPES SIMPLEX VIRUS (STRAIN AD169)	76-102								
PUL34_HSVEB	VIRION GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	214-232	287-321							
PUL34_HSVLA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN A0401)	251-275								
PUL34_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	149-264								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	207-229								
PUL35_HSV11	HYPOTHETICAL PROTEIN UL35	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	244-264								
PUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	228-253	316-329	331-348						
PUL37_EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	143-168	387-410							
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	21-36	133-153	707-730	984-1004					
PUL37_HSVEB	GENE 53 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	228-253	262-277	445-467	663-681	739-777	923-947	1009-1028		
PUL37_HSVLA	GENE 80 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	410-440	491-510	664-690	778-803	901-919				
PUL37_VZVD	GENE 33 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	5-20								
PUL38_HCMVA	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-19	104-124	140-165	168-191	196-211	228-244	248-269	670-694	776-803
PUL40_HCMVA	HYPOTHETICAL PROTEIN UL40	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	904-923								
PUL41_HCMVA	HYPOTHETICAL PROTEIN UL41	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	199-220								
PUL41_HSV11	HEMORRHAGIC PROTEIN UL41	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	18-33								
PUL43_HSVEB	GENE 13 HEMORRHAGIC PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	15-31	116-134							
PUL43_VZVD	GENE 13 HEMORRHAGIC PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	41-63	139-160	301-365	394-421					
PUL43_HSV11	PROTEIN UL43	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	31-49	86-107							
PUL43_HSV1K	PROTEIN UL43	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	88-116	137-146	160-180	277-299	374-400				
PUL43_HSV1M	PROTEIN UL43	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	23-46								
PUL47_HCMVA	PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	23-46								
PUL47_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (STRAIN AD169)	23-46								
PUL47_HSV1F	80 7 KD ALPHA TRANS-INDUCING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	191-218	438-464	533-556	614-640	741-766				
PUL47_HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	404-425								
PUL47_HSVEA	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN PA-2)	404-425								
		EQUINE HERPESVIRUS TYPE 4	641-762								
			380-401								

BAD ORIGINAL

PROGENE ENTRY	PROTEIN	All Viruses (No Bacteriophage) VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PUL21_HSV2B	61 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	317-601								
PUL21_VZVD	ALPHA TRANS-INDUCTING FACTOR 61 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	41-58	603-627							
PUL46_EBV	HYPOTHETICAL 85 KD PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	331-358								
PUL49_HCMVA	HYPOTHETICAL PROTEIN UL49	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	248-264	528-543							
PUL49_HSV11	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	228-252								
PUL49_HSV2A	HYPOTHETICAL GENE 46 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	232-253								
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	96-119								
PUL51_HSV11	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	49-66								
PUL51_HSV2A	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	169-190								
PUL51_HSV2B	GENE 3 PROTEIN	EQUINE HERPESVIRUS 1 (STRAIN AB4P)	164-189								
PUL51_VZVD	GENE 3 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	30-49								
PUL52_EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	44-59								
PUL52_HSV11	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	37-57	63-91							
PUL52_HSV2B	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	8-27								
PUL52_HSV2A	PROBABLE DNA REPLICATION PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	8-27	115-135	116-133						
PUL52_VZVD	PROBABLE DNA REPLICATION GENE 6 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	489-508	586-605							
PUL53_HCMVA	PROTEIN UL53	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	446-466	645-670							
PUL53_EBV	UL53 PROTEIN HOMOLOG	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	133-148								
PUL54_HCMVA	HYPOTHETICAL PROTEIN UL54	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	64-80								
PUL55_HCMVA	HYPOTHETICAL PROTEIN UL55	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	126-141								
PUL56_HCMVA	HYPOTHETICAL PROTEIN UL56	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	62-84	178-205							
PUL57_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL57	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	87-107								
PUL57_EBV	HYPOTHETICAL BLLF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	235-252	409-430	409-430	626-645	770-793				
PUL57_HSV2A	HYPOTHETICAL GENE 33 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	214-230								
PUL58_HCMVA	HYPOTHETICAL PROTEIN UL58	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	61-87			3					
PUL59_HCMVA	HYPOTHETICAL PROTEIN UL59	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	51-71								
PUL70_HCMVA	VIRION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	13-33			1					
PUL70_HCMVA	HYPOTHETICAL PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	268-291	607-628							
PUL71_HCMVA	HYPOTHETICAL PROTEIN UL71	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	71-90	190-205							
PUL73_HCMVA	61 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	46-58								
PUL74_HCMVA	65 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	106-118								
PUL77_EBV	HYPOTHETICAL PROTEIN BCRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	100-116			4					
PUL77_HCMVA	HYPOTHETICAL PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	406-422	530-547							
PUL77_HSV2U	HYPOTHETICAL PROTEIN 3A	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	203-231	599-615	606-628	633-653	757-781				
PUL78_HSV2A	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	201-222	587-609							
PUL81_HCMVA	HYPOTHETICAL PROTEIN UL81	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	163-187	402-422	379-393						
PUL82_HCMVA	HYPOTHETICAL PROTEIN 6A	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	173-191	353-379							
PUL83_HCMVA	HYPOTHETICAL PROTEIN UL83	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-177								
PUL84_HSV2U	HYPOTHETICAL PROTEIN 8A	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	135-150								
PUL85_HCMVA	HYPOTHETICAL PROTEIN UL85	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-65								
PUL87_HSV2U	HYPOTHETICAL PROTEIN 9A	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	74-99								
PUL87_HSV2A	PROTEIN UL84	HERPESVIRUS SAIMIRI (STRAIN 11)	36-55	100-119							
PUL91_EBV	HYPOTHETICAL PROTEIN BGLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	46-70								
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	201-223								
PUL97_HSV2A	HYPOTHETICAL PROTEIN 12A	HERPESVIRUS SAIMIRI (STRAIN 11)	508-526								
PUL97_HCMVA	GANCICLOVIR KINASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	9-30	328-346							
PUL98_HCMVA	HYPOTHETICAL PROTEIN UL102	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	187-209								
PUL99_HCMVA	PROTEIN UL103	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	204-228	541-567							
PUL101_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	184-203								
PUL102_HCMVA	HYPOTHETICAL PROTEIN UL106	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-47								
PUL103_HCMVA	HYPOTHETICAL PROTEIN UL107	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	315-335	423-450							
PUL104_HCMVA	HYPOTHETICAL PROTEIN UL108	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	93-118								
PUL105_HCMVA	HYPOTHETICAL PROTEIN UL111	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	60-81								
PUL107_HCMVA	HYPOTHETICAL PROTEIN UL113	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	298-319								
PUL108_HCMVA	HYPOTHETICAL PROTEIN UL114	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	178-199								
PUL121_HCMVA	HYPOTHETICAL PROTEIN UL121	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	103-130								
			129-153								

BAD ORIGINAL

PGENE	FUNCTION	All Viruses (No Bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PU103_HCMVA	HYPOTHETICAL PROTEIN UL123	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-32							
PUNQ_FOWP1	URACIL-DNA GLYCOSYLASE	FOWLPOX VIRUS (STRAIN FP-1)	12-37							
PUNQ_HSVEB	URACIL-DNA GLYCOSYLASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	224-250							
PUNQ_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-103							
PUNQ_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	82-103							
PUNQ_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	82-103							
PUNQ_VZVD	URACIL-DNA GLYCOSYLASE	VARICELLA ZOSTER VIRUS (STRAIN DUMAS)	217-243							
PU501_HSVEB	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	48-63							
PU501_HSVEK	U51 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	48-63							
PU503_PRVNJ	PROTEIN U53 HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	48-63							
PU503_HCMVA	HOLF1 PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	126-136							
PU505_HSV11	PUTATIVE GLYCOPROTEIN U55	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	24-39							
PU505_HSV2	PUTATIVE GLYCOPROTEIN U55	HERPES SIMPLEX VIRUS (TYPE 2)	33-70							
PU509_HCMVA	HYPOTHETICAL PROTEIN HOLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-70							
PU511_HCMVA	HYPOTHETICAL PROTEIN HOLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	179-204							
PU513_HCMVA	HYPOTHETICAL PROTEIN HVLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	98-113							
PU513_HCMVA	HYPOTHETICAL PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	19-30	113-135	195-222					
PU514_HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-33	208-231						
PU515_HCMVA	HYPOTHETICAL PROTEIN HVLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	336-360							
PU516_HCMVA	HYPOTHETICAL PROTEIN HVLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	178-402	443-466						
PU517_HCMVA	HYPOTHETICAL PROTEIN HVLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	131-178	247-267						
PU519_HCMVA	MEMBRANE PROTEIN HWLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	110-126							
PU521_HCMVA	HYPOTHETICAL PROTEIN HWLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	126-142	178-202	214-233					
PU523_HCMVA	EARLY NUCLEAR PROTEIN HWLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	41-47	155-183						
PU530_HCMVA	HYPOTHETICAL PROTEIN HOLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	270-292							
PU534_HCMVA	HYPOTHETICAL PROTEIN HOLF6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	292-310							
PU539_HCMVA	G-PROTEIN COUPLED REC HOMOLOG U52	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	333-373							
PU539_HCMVT	G-PROTEIN COUPLED REC HOMOLOG U52	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	34-49	140-160						
PU539_HCMVA	HYPOTHETICAL PROTEIN HOLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-49	140-160						
PU543_HCMVA	HYPOTHETICAL PROTEIN HOLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	248-269							
PV01K_LSV	7 KD PROTEIN	LACTOSPHAEROPSIS VIRUS	102-128	208-233						
PV01K_MMV	7 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	41-59							
PV01K_PVS	7 KD PROTEIN	POTATO VIRUS X (PVX)	27-46							
PV01K_PVX	7 KD PROTEIN	POTATO VIRUS X (STRAIN XJ)	28-49							
PV01K_PVX03	7 KD PROTEIN	POTATO VIRUS X (STRAIN XC) (STRAIN CP)	31-48							
PV111_ASFLI	U8 121-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LISSY)	31-48							
PV111_ASFL1	113 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425/ISOLATE LEIDEN)	73-94							
PV11K_PVM	11 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	59-79							
PV11K_TRVTL	18 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	79-96							
PV140_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	24-31							
PV11K_BLVJ	11 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	79-102	846-863	1011-1031					
PV11K_VACCV	PROTEIN 019	ABELSON MURINE LEUKEMIA VIRUS	14-29	106-99						
PV1A_BMMV	1A PROTEIN	VACCINIA VIRUS (STRAIN WR)	29-44	128-134						
PV1A_BMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	114-132	152-172						
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	106-120	151-171						
PV1A_CMVN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	747-767							
PV1A_CMVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	744-763							
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	775-800							
PV1A_PSVI	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN I)	775-800							
PV1K_RSVTH	33.5 KD PROTEIN	TOBACCO RINGSPOT VIRUS (STRAIN HZ)	734-759							
PV1K_TLVI	33 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN J)	472-491	787-808						
PV1K_TLVW	33 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	176-191							
PV2K_BWYV	29 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1)	66-76	189-207						
PV2K_PEBV	29.6 KD PROTEIN	PEA EARLY BROWNING VIRUS	66-76	189-207						
PV2A_BMV	2A PROTEIN	BROME MOSAIC VIRUS	23-43	136-157						
			114-133							
			281-300	358-377						

BAD ORIGINAL

PCGENE	PIRTEXT	All Viruses (No Bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS									
PV1A_CCMV	3A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	196-316								
PV1A_TAV	3A PROTEIN	TOMATO ASPERMY VIRUS	214-235								
PV1K_TRVTC	19 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	61-81								
PV1K_TOBSV	11 KD PROTEIN	TOBACCO STREAK VIRUS (STRAIN WC)	226-250								
PV1J_ASFL1	K1J1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	143-164								
PV1J_ASFL5	L15 1J1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L83/3)	114-135								
PV1J_ASFL3	L15 1J1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN L83/3)	114-135								
PV1A_CCMV	COWPEA CHLOROTIC MOTTLE VIRUS										
PV1A_CMVTN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	160-181								
PV1A_CMVM	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	214-235								
PV1A_CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	214-235								
PV1A_CMVQ	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	214-235								
PV1A_CMVY	CUCUMBER MOSAIC VIRUS (STRAIN Y)		214-235								
PV1A_BV8	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	3-28								
PV1A_BV84	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	5-28								
PV1A_BV85	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 4/91 / ISOLATE LEIDEN)	5-28								
PV1A_BVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN PORTUGAL/1122/91)	5-28								
PV1A_TAV	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/181/84)	5-28								
PV1K_BSMV	31 KD PROTEIN	TOMATO ASPERMY VIRUS	147-168								
PV1K_BWYV	PROTEIN 6B	BARLEY STRIPE MOSAIC VIRUS	120-140								
PV1K_TYMV	69 KD PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	97-116								
PV1K_AMVLE	90 KD PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	12-35								
PVA04_VACCC	PROTEIN A4	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	44-59								
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	213-244								
PVA04_VARV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	213-244								
PVA09_VACCC	PROTEIN A9	VARIOLA VIRUS	207-238								
PVA09_VARV	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-66								
PVA11_VACCC	PROTEIN A11	VARIOLA VIRUS	41-66								
PVA11_VARV	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-44	166-189	199-217						
PVA14_VACCC	PROTEIN A14	VARIOLA VIRUS	23-44	141-166	200-218						
PVA14_VARV	PROTEIN A14	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-62								
PVA16_VACCC	PROTEIN A16	VARIOLA VIRUS	39-62								
PVA16_VARV	PROTEIN A16	VACCINIA VIRUS (STRAIN COPENHAGEN)	341-362								
PVA18_VACCC	14 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	340-361								
PVA18_VACCV	14 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	439-447								
PVA18_VARV	14 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	439-447								
PVA30_VACCC	PROTEIN A30	VARIOLA VIRUS	439-447								
PVA30_VARV	PROTEIN A30	VACCINIA VIRUS (STRAIN COPENHAGEN)	181-211	193-209							
PVA33_VARV	PROTEIN A33	VARIOLA VIRUS	107-131	193-209							
PVA33_VACCV	PROTEIN A33	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	38-82								
PVA33_VARV	PROTEIN A33	VARIOLA VIRUS	53-76								
PVA33_VACCV	PROTEIN A33	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	205-220								
PVA33_VACCC	PROTEIN A33 PRECURSOR	VARIOLA VIRUS	135-190								
PVA33_VACCV	PROTEIN A33 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	33-49								
PVA33_VARV	PROTEIN A33 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	33-49	141-164							
PVA37_VACCV	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	66-90								
PVA37_VACCC	PROTEIN A37	VACCINIA VIRUS (STRAIN WR)	66-90								
PVA41_VACCC	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-30								
PVA41_VACCV	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-71								
PVA41_VARV	PROTEIN A41 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	47-71								
PVA47_VACCC	PROTEIN A47	VARIOLA VIRUS	47-71								
PVA47_VACCV	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	59-79	201-226							
PVA47_VARV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	59-79	201-226							
PVA55_VACCC	PROTEIN A55	VARIOLA VIRUS	59-79	201-226							
PVA55_VACCV	PROTEIN A55	VACCINIA VIRUS (STRAIN COPENHAGEN)	247-268	384-404							
PVA55_VARV	PROTEIN A55	VACCINIA VIRUS (STRAIN WR)	247-268	384-404							
PVA1J_BCTV	A1J PROTEIN	BEET CURLY TOP VIRUS	14-33								

BAD ORIGINAL

PCGENE	FUNCTION	All Viruses (No Bacteriophage)									
TITLE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA2	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PVALI_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 144)	39-58								
PVALI_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	39-58								
PVALI_DCTV	ALI PROTEIN	BEET CURLY TOP VIRUS	82-106								
PVALI_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 144)	77-97								
PVALI_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-97								
PVALI_TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE)	78-97								
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	77-97								
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DAI)	114-133								
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	114-133								
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	114-133								
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	114-133								
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	114-133								
PVAT_CAMVW	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	114-133								
PVAT_CARV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	34-60								
PVAT_FMVD	APHID TRANSMISSION PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DX5)	141-161								
PVB02_VACCC	PROTEIN B2	VACCINIA VIRUS (STRAIN COPENHAGEN)	133-159								
PVB02_VACCV	PROTEIN B2	VACCINIA VIRUS (STRAIN WR)	135-176								
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	135-176								
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)									
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	489-511								
PVB05_VACCD	PLAQUE SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16MO)	489-511								
PVB05_VACCC	PLAQUE SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	231-271								
PVB05_VACCL	PLAQUE SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	231-271								
PVB05_VACCV	PLAQUE SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	231-271								
PVB06_VACCV	PROTEIN B6	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	231-271								
PVB13_VACCC	PROTEIN B13	VACCINIA VIRUS (STRAIN COPENHAGEN)	59-82								
PVB13_VACCV	PROTEIN B13	VACCINIA VIRUS (STRAIN WR)	121-143								
PVB13_VARV	PROTEIN B13	VARIOLA VIRUS	121-143								
PVB17_VACCC	PROTEIN B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-143								
PVB17_VACCV	PROTEIN B17	VACCINIA VIRUS (STRAIN WR)	151-179								
PVBLI_CLVK	BLI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 144)	34-51								
PVBLI_CLVN	BLI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	34-51								
PVBLI_SLCV	BLI PROTEIN	SQUASH LEAF CURL VIRUS	34-51								
PVBRI_ABMVW	BRI PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	245-268								
PVBRI_BGMV	BRI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	166-191								
PVBRI_PYMVV	BRI PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	166-191								
PVBRI_SLCV	BRI PROTEIN	SQUASH LEAF CURL VIRUS	166-191								
PVC01_VACCC	PROTEIN C1	VACCINIA VIRUS (STRAIN COPENHAGEN)	193-218								
PVC01_VACCV	PROTEIN C1	VACCINIA VIRUS (STRAIN WR)	70-90								
PVC01_VARV	PROTEIN C1	VARIOLA VIRUS	71-93								
PVC03_SFVLA	HYPOTHETICAL PROTEIN C3	SHOPE FIBROMA VIRUS (STRAIN KASZA)	38-78								
PVC03_SFVLA	C-PROTEIN COUPLED RECEPTOR HOMOLOG C3	SHOPE FIBROMA VIRUS (STRAIN KASZA)	8-31								
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	98-123	179-197							
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	102-309								
PVC06_SFVLA	HYPOTHETICAL PROTEIN C6	SHOPE FIBROMA VIRUS (STRAIN KASZA)	101-309								
PVC08_SFVLA	HYPOTHETICAL PROTEIN C8	SHOPE FIBROMA VIRUS (STRAIN KASZA)	10-47								
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	14-30								
PVC09_VACCV	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	46-59								
PVC10_SFVLA	HYPOTHETICAL PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	46-59								
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	15-109								
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-64								
PVC10_VARV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	42-64								
PVC11_VACCC	PROTEIN C11/B13	VARIOLA VIRUS	42-64								
PVC11_VACCC	PROTEIN C11/B13	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-68								
PVC11_VACCC	PROTEIN C11/B13	VACCINIA VIRUS (STRAIN COPENHAGEN)	301-326								
PVCAP_EBV	MAJOR CAPSID PROTEIN	VACCINIA VIRUS (STRAIN DYS-1)	3-28								
		EPSTEIN-BARR VIRUS (STRAIN B95-1)	148-172	186-211	1072-1093						

BAD ORIGINAL

PCGENE	PIRCLASS	All Viruses (No Bacteriophage)										
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9	AREA10
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	668-684	840-860	811-891							
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	203-302	338-384	1137-1152							
PVCAP_HSVEB	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	137-203	272-858								
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	137-203	272-858								
PVCAP_PAVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S)	144-168	269-287	1057-1072	1062-1089						
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	135-163									
PVCAP_NPVAC	DNA-BINDING PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	381-401	891-910	1136-1176							
PVD01_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	60-81									
PVD01_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	12-39									
PVD01_VAIV	PROTEIN D1	VARIOLA VIRUS	12-39									
PVD01_FOWPI	91 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	206-265	335-337								
PVD05_SFVKA	PROTEIN D5	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-71	131-198								
PVD05_VACCC	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	326-340	694-714	715-734							
PVD05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	326-340	694-714	715-734							
PVD05_VAIV	PROTEIN D5	VARIOLA VIRUS	326-340	694-714	715-734							
PVD8F_CAMVC	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	37-56									
PVD8F_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D11)	37-56									
PVD8F_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D1C)	37-56									
PVD8F_CAMVN	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	37-56									
PVD8F_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	37-56									
PVE8_VACCC	PROTEIN E8	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-97	335-380	340-358							
PVE8_VACCV	PROTEIN E8	VACCINIA VIRUS (STRAIN WR)	76-97	335-380	340-358							
PVE8_VAIV	PROTEIN E8	VARIOLA VIRUS	76-97	335-380	340-358							
PVE8_VACCC	PROTEIN E8	VACCINIA VIRUS (STRAIN COPENHAGEN)	314-339									
PVE8_VACCD	PROTEIN E8	VACCINIA VIRUS (STRAIN DARIEN I)	324-339									
PVE8_VACCV	PROTEIN E8	VACCINIA VIRUS (STRAIN WR)	324-339	430-451								
PVE8_VAIV	PROTEIN E8	VARIOLA VIRUS	324-339									
PVE8_VACCC	PROTEIN E8	VACCINIA VIRUS (STRAIN COPENHAGEN)	324-339									
PVE8_VACCV	PROTEIN E8	VACCINIA VIRUS (STRAIN WR)	410-451									
PVE8_VAIV	PROTEIN E8	VARIOLA VIRUS	410-451									
PVE8_VACCC	PROTEIN E8	VACCINIA VIRUS (STRAIN COPENHAGEN)	331-367	430-451								
PVE8_VACCV	PROTEIN E8	VACCINIA VIRUS (STRAIN WR)	334-370									
PVE8_VAIV	PROTEIN E8	VARIOLA VIRUS	334-370									
PVE11_HPV16	PROBABLE E1 PROTEIN 3	HUMAN PAPILLOMAVIRUS TYPE 16	334-370									
PVE11_NPVAC	EARLY 18.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	107-183									
PVE1_BPV1	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	106-133									
PVE1_BPV2	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 2	265-282	517-533								
PVE1_CRPVK	E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	265-281	516-532								
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	7-22									
PVE1_HPV13	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	258-273	311-334								
PVE1_HPV16	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	108-124									
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	264-281	117-333	344-364							
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	233-254									
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	238-260									
PVE1_HPV35	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	234-254									
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	161-180									
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	184-320									
PVE1_HPV58	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	238-260									
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	238-253	311-334								
PVE1_HPV1	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	233-252	310-326								
PVE1_RBPV1	E1 PROTEIN	RABBIT PAPILLOMAVIRUS TYPE 1	236-309									
PVE3_CRPVK	PROBABLE E3 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	284-300	308-333								
PVE3_HPV11	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	281-318									
PVE3_HPV16	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	295-320									
PVE3_HPV18	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	288-306									
PVE3_HPV1A	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	284-300									
PVE3_HPV31	E3 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	311-326									

BAD ORIGINAL

PGENE	FUNCTION	All Viruses (No Bacteriophages)									
TIER NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA2
PVE1_HPV1	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1)	275-593								
PVE1_HPV3	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 3)	289-307								
PVE1_HPV5	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5)	292-310								
PVE1_HPV4	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 4)	321-338								
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	167-184								
PVE1_PAPVD	PROBABLE E1 PROTEIN	DEER PAPILLOMAVIRUS	286-311								
PVE1_POVI	E1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	333-351								
PVE1_RHPVI	E1 PROTEIN	RHESUS PAPILLOMAVIRUS (VARIANT 1)	266-326								
PVE1_HPV16	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS (VARIANT)	2nd 108								
PVE1_HPV18	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	19-59								
PVE1_HPV41	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	56-76								
PVE1_HPV11	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	59-81								
PVE1_RHPVI	PROBABLE E1A PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	63-87								
PVE1A_HPV11	PROBABLE E1A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	19-43								
PVE1_BPVI	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1 AND TYPE 2	19-43								
PVE1_HPV31	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	2-26								
PVE1_HPV31	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1	19-43								
PVE1_HPV33	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	31-52								
PVE1_HPV42	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	43-65								
PVE1_HPV51	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	31-53								
PVE1_HPV16	PROBABLE E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	86-113								
PVE1_BPVI	E1 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	109-132								
PVE1_CRPVX	E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	23-41								
PVE1_HPV8	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	6-23								
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	133-151								
PVE1_HPV3	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 3)	8-27								
PVE1_HPV5	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5)	9-26								
PVE1_HPV9	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 9)	9-26								
PVE1_HPV10	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 10	8-27								
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	9-26								
PVE1_CRPVX	E1 PROTEIN	MICROTUS MINUTUS PAPILLOMAVIRUS	7-33	16-60							
PVE1_HPV13	E1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	71-88								
PVE1_HPV11	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	77-93								
PVE1_HPV16	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-87								
PVE1_HPV6B	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	26-37								
PVE1_RPVI	E1 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	79-101								
PVE4_MPVAC	EARLY M ED PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	78-99	203-222							
PVE7_OVTN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS	154-175	233-260	677-696						
PVENV_BEV	ENVELOPE PROTEIN	BERNE VIRUS	63-86	83-114							
PVENV_DHVI	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/1313/61)	42-57	484-511							
PVENV_EAV	PROBABLE ENVELOPE PROTEIN	EQUINE ARTERITIS VIRUS	23-41								
PVENV_LELV	PROBABLE ENVELOPE PROTEIN	LELYSTAD VIRUS	23-47	148-168							
PVENV_MCV1	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1	61-80								
PVENV_MCV2	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2	61-80	306-333							
PVENV_THOGV	ENVELOPE GLYCOPROTEIN PRECURSOR	THOGOTO VIRUS	61-80								
PVENV_NPVAC	ECORI F SITE PROTEIN ETM	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	196-221	356-383	473-491						
PVF6_VACCC	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	83-103								
PVF6_VACCI	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-IVP)	280-303								
PVF6_VACCV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	280-303								
PVF6_VARV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	281-304								
PVF8_VACCC	PROTEIN F8	VACCINIA VIRUS (STRAIN COPENHAGEN), AND (STRAIN L-IVP)	280-303								
PVF8_VACCV	PROTEIN F8	VACCINIA VIRUS (STRAIN WR)	176-200								
PVF8_VARV	PROTEIN F8	VARIOLA VIRUS	176-200								
PVF11_VACC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	161-184								
PVF11_VARV	PROTEIN F11	VARIOLA VIRUS	161-184								
PVF13_VACCC	PROTEIN F13	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-45								

BAD ORIGINAL

ACCESSION	FUNCTION	All Viruses (No Bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
OLF NAME	PROTEIN	VIRUS									
PVF11_VACCP	PROTEIN F11	VACCINIA VIRUS (STRAIN L-IVP)	3-26								
PVF11_VAAV	PROTEIN F11	VARIOLA VIRUS	28-51								
PVF11_FOWPV	PROTEIN F11	FOWLPOX VIRUS	297-323								
PVF11_FOWPV	PROTEIN F11	FOWLPOX VIRUS	88-104								
PVF11_CAPVK	PROTEIN F11	CAPRIPOXVIRUS (STRAIN KS-1)	89-111								
PVF11_FOWPV	PROTEIN F11	FOWLPOX VIRUS	65-90								
PVF11_CAPVK	CL11A PROTEIN	CAPRIPOXVIRUS (STRAIN KS-1)	51-76								
PVF12_ORFVN	18 KD FUSION PROTEIN	ORF VIRUS (STRAIN NZ2)	39-48								
PVF12_VACCA	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR 65-16)	12-54								
PVG01_HSV11	HYPOTHETICAL GENE 1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	169-193								
PVG01_HSV11	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1	210-233	337-359	389-416						
PVG01_VACCC	PROTEIN 01	VACCINIA VIRUS (STRAIN COPENHAGEN)	296-318	336-351							
PVG01_VACCV	PROTEIN 01	VACCINIA VIRUS (STRAIN WR)	237-253	315-334							
PVG01_VAAV	PROTEIN 01	VARIOLA VIRUS	296-318	336-351							
PVG01_VZVD	HYPOTHETICAL GENE 1 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	38-42								
PVG01_VACCC	PROTEIN 01	VACCINIA VIRUS (STRAIN COPENHAGEN)	58-72								
PVG01_VAAV	PROTEIN 01	VARIOLA VIRUS	58-72								
PVG04_VACCC	PROTEIN 04	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-33								
PVG04_VAAV	PROTEIN 04	VARIOLA VIRUS	11-33								
PVG04_VACCC	PROTEIN 04	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-51								
PVG04_VAAV	PROTEIN 04	VARIOLA VIRUS	31-51								
PVG08_HSV11	HYPOTHETICAL GENE 8 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	134-149	159-185							
PVG10_HSV1A	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	33-54								
PVG11_HSV11	HERPESVIRUS IAHUKU	HERPESVIRUS SAIMIRI (STRAIN 11)	109-126	335-359							
PVG13_HSV11	HYPOTHETICAL GENE 13 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	103-122	136-156							
PVG13_HSV1A	HYPOTHETICAL GENE 13 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	131-170	210-286							
PVG15_HSV11	HYPOTHETICAL GENE 15 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	64-92								
PVG15_HSV11	HYPOTHETICAL GENE 19 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	88-112								
PVG1_AMEPV	GIL PROTEIN	AMEACTA MOOREI ENTOMOPOXVIRUS	113-136								
PVG1_SPV1A	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-KIRAI B	76-92	659-678							
PVG11_HSV11	HYPOTHETICAL GENE 11 PROTEIN	ICTALURID HERPESVIRUS 1	300-327								
PVG11_HSV11	HYPOTHETICAL GENE 11 PROTEIN	ICTALURID HERPESVIRUS 1	314-335								
PVG11_HSV1A	HYPOTHETICAL GENE 11 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	338-364								
PVG11_HSV11	HYPOTHETICAL GENE 11 PROTEIN	ICTALURID HERPESVIRUS 1	309-326								
PVG11_HSV1A	HYPOTHETICAL GENE 11 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	193-197	491-518							
PVG15_HSV11	HYPOTHETICAL GENE 19 PROTEIN	ICTALURID HERPESVIRUS 1	14-40								
PVG15_HSV11	HYPOTHETICAL GENE 30 PROTEIN	ICTALURID HERPESVIRUS 1	18-42								
PVG15_VZVD	GENE 33 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	164-191								
PVG16_HSV1A	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	90-109								
PVG17_HSV11	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	188-215	344-362							
PVG19_HSV11	HYPOTHETICAL GENE 19 PROTEIN	ICTALURID HERPESVIRUS 1	284-299								
PVG40_HSV11	HYPOTHETICAL GENE 40 PROTEIN	ICTALURID HERPESVIRUS 1	641-655	976-990	1038-1063						
PVG41_HSV11	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1	14-32								
PVG43_HSV11	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1	11-36	62-81	244-260						
PVG44_HSV11	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	109-133	137-178	322-345	521-538					
PVG48_HSV1A	HYPOTHETICAL GENE 48 PROTEIN	ICTALURID HERPESVIRUS 1	134-156	580-607	933-963	1244-1276					
PVG50_HSV1A	PROB TRANSCRIPTION ACTIVATOR EDNF1	HERPESVIRUS SAIMIRI (STRAIN 11)	71-93								
PVG51_HSV11	HYP GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	5-30	58-83							
PVG52_HSV11	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1	29-49	84-102							
PVG53_HSV11	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1	219-233								
PVG55_HSV1A	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	22-53	143-158	288-309						
PVG56_HSV11	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	83-106								
PVG58_HSV1A	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	1115-1176								
PVG59_HSV11	HYP GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	136-146	206-288	293-319	330-346					
PVG5_SPV4	GENE 5 PROTEIN	SPIROPLASMA VIRUS 4	140-161	167-189							
PVG60_HSV11	HYPOTHETICAL GENE 60 PROTEIN	ICTALURID HERPESVIRUS 1	42-64								
			30-51	333-35							

BAD ORIGINAL

PCGENE	P1ICTL2IP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVG61_HSV1I	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1	76-102	117-136							
PVG63_HSV1I	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	238-259	336-363							
PVG64_HSV1I	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	420-445								
PVG65_HSV1I	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	117-137	155-173	362-378	518-533	1147-1174	1347-1359			
PVG67_HSV1I	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	108-132	171-188	318-344	722-745	1005-1029	1072-1091	1315-1341		
PVG6_SPV1R	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	60-82								
PVG70_HSV1I	HYPOTHETICAL GENE 70 PROTEIN	ICTALURID HERPESVIRUS 1	184-209								
PVG71_HSV8A	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	89-105								
PVG72_HSV1I	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	445-471	535-561	720-744	1252-1269					
PVG74_HSV8A	G-PROTEIN COUPLED REC HOMOLOG ECRF3	HERPESVIRUS SAIMIRI (STRAIN 11)	124-151								
PVG9_SPV1R	GENE 9 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	57-72								
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1587-1606	1856-1877	2108-2127	2210-2226	2788-2806	2973-2999	3073-3090	3120-3145	3374-3399
			3601-3625								
PVGH3_HCMVA	GLYCOPROTEIN H361 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	157-178								
PVGL1_CVPR8	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004/UKITISH15	174-193								
PVGL2_CVBF	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBL9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	123-139	174-190	264-279	651-674	991-1017	1259-1280			
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBM	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	123-139	174-190	264-279	991-1017	1259-1280				
PVGL2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	31-47	123-139	174-190	264-279	991-1017	1259-1280			
PVGL2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	123-139	174-190	264-279	991-1017	1259-1280				
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	768-794	1053-1071	1115-1134						
PVGL2_CVM44	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	95-111	999-1025	1267-1290	1317-1338					
PVGL2_CVMA5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	95-111	947-973	1215-1238	1265-1286					
PVGL2_CVMJC	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	95-111	999-1025	1267-1290	1317-1338					
PVGL2_CVMJH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	95-111	858-884	1126-1149	1176-1197					
PVGL2_CVPF8	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	442-457	800-816	1038-1064	1274-1297				
PVGL2_CVPMI	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	442-457	506-521	800-816	1038-1064	1274-1297			
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL2_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL2_CVPRS	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH I	218-233	576-592	814-840	1050-1073					
PVGL2_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	218-233	576-592	814-840	1050-1073					
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	64-83	440-455	504-519	798-814	1036-1062	1272-1295			
PVGL3_FIPV	E3 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	803-819	1041-1067	1277-1300						
PVGL3_IBV6	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	196-219	588-607	771-797	1056-1081	1094-1111				
PVGL3_IBVB	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	195-218	587-606	770-796	1055-1080					
PVGL3_IBVD2	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274) (	196-219	588-607	771-797	1056-1081					
PVGL3_IBVD3	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D3896)	196-219								
PVGL3_IBVK	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	195-218	587-606	770-796	1055-1080					
PVGL3_IBVM	E3 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	195-218	378-398	587-606	770-796	1055-1080				
PVGL3_IBVU1	E3 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/123/82)	178-201								
PVGL3_IBVU2	E3 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/142/86)	178-201								
PVGL3_IBVU3	E3 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/167/84)	178-201								
PVGLB_EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	732-752								
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-558	706-732	750-777						
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	536-559	707-733	751-778						
PVGLB_HSV1I	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-104								
PVGLB_HSV1F	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	82-103								
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	82-103								
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	83-104								
PVGLB_HSV2I	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	79-99								
PVGLB_HSV2H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	79-99								
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SAB)	65-85								
PVGLB_HSV6U	GLYCOPROTEIN B (FRAGMENT)	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	72-92	117-144							
PVGLB_HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	560-578	689-707							
PVGLB_HSVB2	GLYCOPROTEIN B-I PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV) (BOVINE MAMMILLITIS	279-299	745-767							
PVGLB_HSVBC	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	692-710								

PCGENE	PISCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLB_HSVE1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A) (EHV-1)	736-753								
PVGLB_HSVE4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	675-692								
PVGLB_HSVEA	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	736-753								
PVGLB_HSVEB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	736-753								
PVGLB_HSVEL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	736-753								
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	589-613								
PVGLB_HSVSA	GLYCOPROTEIN B PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	483-506	584-602	701-716						
PVGLB_ILTV6	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN 632)	256-275	597-621	740-758						
PVGLB_ILTV8	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2)	266-285	607-631	750-768						
PVGLB_ILTVT	GLYCOPROTEIN B PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	266-285	607-631	750-768						
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-156	566-589	738-765						
PVGLB_PRVIF	GLYCOPROTEIN GII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	203-218								
PVGLB_VZVD	GLYCOPROTEIN B PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	522-538								
PVGLC_HSV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	3-22	467-493							
PVGLC_HSV1K	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	3-22	467-493							
PVGLC_HSV2	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	435-458								
PVGLC_HSV23	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	436-459								
PVGLC_HSVBC	GLYCOPROTEIN GIII PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	475-494								
PVGLC_HSVE4	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	444-459								
PVGLC_HSVEB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KENTUCK	427-442								
PVGLC_HSVMB	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	399-421								
PVGLC_HSVMD	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	399-421								
PVGLC_HSVMO	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	398-420								
PVGLC_HSVMO4	SECRETORY GLYCOPROTEIN GP57-65 PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	399-421								
PVGLC_PRVIF	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	180-197	446-472							
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	431-449								
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	431-449								
PVGLD_HSV11	GLYCOPROTEIN D PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17), AND (TYPE 1 / STRAIN	79-94								
PVGLD_HSV2	GLYCOPROTEIN D PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	79-94								
PVGLE_HSV11	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	104-129	413-437							
PVGLE_VZVD	GLYCOPROTEIN E PRECURSOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	469-493								
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	205-221	265-287	482-504						
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	205-221	265-280	484-506						
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	205-221	265-280	484-506						
PVGLF_CDVD	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	336-361	398-414	562-589						
PVGLF_HRSV1	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 185	205-221	265-280	484-506						
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	205-221	265-280	484-506						
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LO	205-221	265-280	484-506						
PVGLF_HRSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	205-221	265-280	484-506						
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)and (STRAIN HALLE)	224-245	286-302	451-477						
PVGLF_MEASI	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-J-CA)	227-248	289-305	454-480						
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	224-245	286-302	451-477						
PVGLF_MUMP1	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	5-20	276-292	446-467						
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	276-292	446-467							
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	276-292	446-467							
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	5-20	276-292	446-467						
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	273-289								
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	273-289								
PVGLF_NDVHJ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HERTS3)	273-289								
PVGLF_NDVHI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BI-HITCHNER/47)	273-289								
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	273-289								
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	273-289								
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	273-289								
PVGLF_NDVT	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	273-289								
PVGLF_NDVTG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B /48)	273-289								
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	273-289								
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	269-285	305-326	367-383	531-558					

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLF_M1HC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	456-477								
PVGLF_M2H	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	450-471								
PVGLF_M2HG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	450-471								
PVGLF_M2HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	450-471								
PVGLF_M3B	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	405-426	453-474							
PVGLF_M3H4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	2-20	283-310	453-474						
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	220-241	282-298	447-473						
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	220-241	282-298	447-473						
PVGLF_SENDS	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	460-481								
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	460-481								
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	460-481								
PVGLF_SENDJ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	460-481								
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	460-481								
PVGLF_SV41	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	453-474								
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN WJ)	401-425	446-467							
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	175-191	452-474							
PVGLG_IHNV	SPIKE GLYCOPROTEIN PRECURSOR	INFECTIOUS HEMATOPOIETIC NECROSIS VIRUS (STRAIN ROUND BUT	77-99								
PVGLG_RABVE	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN ERA)	454-474								
PVGLG_RABVH	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN HEP-FLURY)	372-391	454-474							
PVGLG_RABVP	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN PV)	454-474								
PVGLG_RABVS	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN SAD B19)	454-474								
PVGLG_RABVT	SPIKE GLYCOPROTEIN PRECURSOR	RABIES VIRUS (STRAIN STREET)	454-474								
PVGLO_TRTV	MAJOR SURFACE GLYCOPROTEIN G	TURKEY RHINOTRACHEITIS VIRUS	199-216								
PVGLO_VHSV0	SPIKE GLYCOPROTEIN PRECURSOR	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	406-428								
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	211-237	365-382	574-598	691-712					
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	210-236	364-381	573-597	690-711					
PVGLH_HSV11	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	245-262	443-467	803-827						
PVGLH_HSV1E	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	245-262	443-467	803-827						
PVGLH_HSV2G	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN G5)	314-332								
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	304-325	814-839							
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)and (ISOLATE HVS25A)	297-318	807-832							
PVGLH_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	454-479	658-679							
PVGLH_MCMV5	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	670-690								
PVGLI_HCMVA	IE GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-180								
PVGLI_HSV11	GLYCOPROTEIN I	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	43-60								
PVGLI_HSVEB	GLYCOPROTEIN I PRECURSOR	EQUINE HERPESVIRUS TYPE 1	44-63								
PVGLI_VZVD	GLYCOPROTEIN I	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	278-297								
PVGLM_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	117-136	197-222							
PVGLM_BUNL7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	31-55	81-98	190-211	1325-1345	1387-1410				
PVGLM_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	31-55	81-98	190-211	1325-1345	1387-1410				
PVGLM_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	193-218	1379-1404							
PVGLM_DUGBV	M POLYPROTEIN PRECURSOR	DUGBE VIRUS									
PVGLM_HANTB	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN B-1)	355-371	692-717	900-915	999-1019					
PVGLM_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	499-515	694-718	1000-1020						
PVGLM_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEE)	499-515	694-719	1001-1021						
PVGLM_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	499-515	694-719	1001-1021						
PVGLM_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS (INSV)	18-44	269-293	348-367	531-551	815-841				
PVGLM_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	152-171								
PVGLM_PTPV	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	743-765	997-1016	1275-1302						
PVGLM_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS B1)	155-174	509-525	712-729						
PVGLM_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	155-174	509-525	712-729	1092-1119					
PVGLM_RVFV	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS	53-80	344-368	830-856						
PVGLM_RVFVZ	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	53-80	344-368	830-856	1156-1176					
PVGLM_SEOU8	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	355-371	692-717	900-915	999-1019					
PVGLM_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	355-371	693-718	901-916	1000-1020					
PVGLM_SEOUS	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN SR-11) (SAPPORO RAT VIRUS)	355-371	692-717	900-915	999-1019					
PVGLM_UUK	M POLYPROTEIN PRECURSOR	UUKUNIEMI VIRUS	561-585	655-674	826-842	925-952	966-989				

PCGENE	PIRCTEZIP	All Viruses (No Bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLP_BEV	PEPLOMER GLYCOPROTEIN PRECURSOR	BEANS VIRUS	430-452	869-885	1099-1124	1546-1568					
PVGLX_HSVEB	GLYCOPROTEIN X PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)									
PVGLX_HSVEK	GLYCOPROTEIN GX PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)									
PVGLX_HSVEL	GLYCOPROTEIN GX	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)									
PVGLX_PRVRU	SECRETED GLYCOPROTEIN GX	PSEUDORABIES VIRUS (STRAIN RICE)	149-176								
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	12-38								
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	12-38	237-258	426-448						
PVGLY_LASSJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	12-35	238-259	427-449						
PVGLY_LYCVA	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	12-35								
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	12-35	89-108							
PVGLY_MOPEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPEIA VIRUS	12-35	425-447							
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	12-38	441-466							
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	12-38								
PVGLY_TACV5	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V5)	12-38								
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	12-38								
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	12-38								
PVGN8_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS	141-161	569-594	757-783	1110-1135	1165-1184				
PVGN84_CPMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS	311-335	741-764							
PVGP2_EBV	PROBABLE MEMBRANE ANTIGEN GP220	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	657-681								
PVGP3_EBV	ENVELOPE GLYCOPROTEIN GP340	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	854-878								
PVGP8_EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-88								
PVGP_EBOV	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	34-52	537-561	653-675						
PVGP_MABVM	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	538-562	607-627							
PVGP_MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	538-562	607-627							
PVH01_VACCC	PROTEIN-TYROSINE PHOSPHATASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	76-92	105-121							
PVH01_VACCV	PROTEIN-TYROSINE PHOSPHATASE	VACCINIA VIRUS (STRAIN WR)	76-92	105-121							
PVH01_VARV	PROTEIN-TYROSINE PHOSPHATASE	VARIOLA VIRUS	76-92	105-121							
PVH07_VACCV	LATE PROTEIN H7	VACCINIA VIRUS (STRAIN WR)	70-97								
PVH07_VARV	LATE PROTEIN H7	VARIOLA VIRUS	70-97								
PVHEL_FXMV	PROBABLE HELICASE	FOXTAIL MOSAIC VIRUS	182-205								
PVHEL_PAMV	PROBABLE HELICASE	PAPAYA MOSAIC POTEXVIRUS	153-168								
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	120-135								
PVI01_VARV	PROTEIN I1	VARIOLA VIRUS	120-135								
PVI03_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	194-220								
PVI03_VACCV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	194-220								
PVI03_VARV	PROTEIN I3	VARIOLA VIRUS	194-220								
PVI06_VACCV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	106-128	133-155							
PVI06_VARV	PROTEIN I6	VARIOLA VIRUS	106-128	133-155							
PVI07_VACCC	PROTEIN I7	VACCINIA VIRUS (STRAIN COPENHAGEN)	13-34	344-367							
PVI07_VACCV	PROTEIN I7	VACCINIA VIRUS (STRAIN WR)	13-34	344-367							
PVI07_VARV	PROTEIN I7	VARIOLA VIRUS	13-34	344-367							
PVI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	196-212	418-438							
PVI08_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	196-212	418-438							
PVI08_VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	196-212	418-438							
PVIE1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	77-100	333-350							
PVIE1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN 1	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	77-100	333-350							
PVIE2_HCMVA	45 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	14-32	389-406							
PVIE2_HCMVT	45 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	14-32	388-405							
PVIE2_MCMVS	IMMEDIATE-EARLY PROTEIN 2	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	251-272								
PVIE2_HCMVT	30 KD IMMEDIATE-EARLY PROTEIN 2	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	14-32								
PVIE6_HSVSA	IMMEDIATE-EARLY PROTEIN IE-G	HERPESVIRUS SAIMIRI (STRAIN 11)	65-80								
PVIEN_NPVAC	IMMEDIATE-EARLY REG PROTEIN IE-N	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	100-116	273-290							
PVIMP_EBV	PROB INTEGRAL MEMBRANE PROTEIN BBRF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	75-100	125-152	203-222						
PVIMP_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	68-89	190-217							
PVIMP_HSV11	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-110	250-270							
PVIMP_HSVEB	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	24-49	93-120	145-172	247-263	301-321	332-358			
PVIMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	76-101	313-331							

PCGENE	P1SCTL2JF	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVJ4P_VZVD	PROBABLE INTEGRAL MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	21-47	154-181	230-252						
PVJ01_VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-110								
PVJ01_VACCV	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	89-110								
PVJ01_VARV	PROTEIN J1	VARIOLA VIRUS	89-110								
PVK04_VACCC	PROTEIN K4	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-113	208-234	319-337						
PVK04_VACCV	PROTEIN K4 1	VACCINIA VIRUS (STRAIN WR)	87-113	208-234	319-337						
PVK05_VACCC	PROTEIN K5	VACCINIA VIRUS (STRAIN COPENHAGEN)	106-133								
PVL02_VACCC	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-61								
PVL02_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	39-61								
PVL02_VARV	PROTEIN L2	VARIOLA VIRUS	39-61								
PVL03_VACCC	PROTEIN L3	VACCINIA VIRUS (STRAIN COPENHAGEN)	148-164	186-208	292-315						
PVL03_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR)	148-164	186-208	292-315						
PVL03_VARV	PROTEIN L3	VARIOLA VIRUS	147-163	185-207	291-314						
PVL05_VACCV	PROTEIN L5	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	16-39								
PVL05_VARV	PROTEIN L5	VARIOLA VIRUS	16-39								
PVL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	299-317								
PVL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	28-55								
PVL1_HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	38-63								
PVL1_REOVD	MAJOR CORE PROTEIN LAMBDA 1	REOVIRUS (TYPE 3 / STRAIN DEARING)	327-346	351-366	752-774						
PVL2_HPV08	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	254-270								
PVL2_HPV11	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	32-58								
PVL2_HPV13	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	33-59								
PVL2_HPV16	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	34-60								
PVL2_HPV18	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	33-59								
PVL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	213-228								
PVL2_HPV2A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	88-114								
PVL2_HPV31	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	34-60	443-462							
PVL2_HPV33	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	33-59	99-114							
PVL2_HPV35	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	34-60								
PVL2_HPV41	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	39-58	414-436							
PVL2_HPV42	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	33-59	344-370							
PVL2_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	250-265								
PVL2_HPV57	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	32-58								
PVL2_HPV58	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	33-59	99-114							
PVL2_HPV6B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	33-59								
PVL2_PAPVE	PROBABLE L2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	30-56								
PVL2_RHPV1	PROBABLE L2 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	45-71								
PVL2_HPV5B	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5B	6-28								
PVL3_REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING	714-737								
PVL3_REOVJ	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	714-737	1213-1236							
PVL3_REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	714-737								
PVL9K_IIV1	L9K PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS TYPE 1)	144-170	196-220	686-711	845-861					
PVM01_VACCC	PROTEIN M1	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-159	177-195	281-302						
PVM01_VACCV	PROTEIN M1	VACCINIA VIRUS (STRAIN WR)	83-108	126-144	230-251						
PVM01_VARV	PROTEIN M1	VARIOLA VIRUS	81-106	124-142	228-249						
PVM1_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING)	141-168	227-245	280-304	324-347	414-436	454-477			
PVM1_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	141-168	227-245	280-304	414-436	454-477				
PVM2I_REOVD	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-192								
PVM2J_REOVD	MAJOR VIRION STRUCT PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-192								
PVM2_REOVJ	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	168-192								
PVM2_REOVL	MAJOR VIRION STRUC PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-192								
PVM3_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	304-326	521-540							
PVMAT_BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	37-62								
PVMAT_CDVD	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT)	148-165	283-309							
PVMAT_HRSVA	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	44-62	139-160							
PVMAT_LPMV	MATRIX PROTEIN	LA PIEDAD-MICHOACAN-MEXICO VIRUS	311-338								
PVMAT_MEASE	MATRIX PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	283-309								

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMAT_MEASH	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HALLE)	283-309								
PVMAT_MEASI	MATRIX PROTEIN	MEASLES VIRUS (STRAIN IP-J-CA)	87-111								
PVMAT_MEASU	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HU2)	283-309								
PVMAT_MUMP1	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	191-207	227-250	310-330						
PVMAT_MUMPS	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL)	191-207	227-250	310-330						
PVMAT_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	135-151	190-208	309-329						
PVMAT_NDVB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	135-151	190-208	309-329						
PVMAT_H1HC	MATRIX PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	195-217								
PVMAT_H2HT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIBA) (PIV-2)	132-154	189-205	308-328						
PVMAT_H4HA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	312-332								
PVMAT_H4HB	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	312-332								
PVMAT_RINDK	MATRIX PROTEIN	RINDERPEST VIRUS (STRAIN KABETE O)	200-221	239-260	283-309						
PVMAT_SENDF	MATRIX PROTEIN	SENDAI VIRUS (STRAIN FUSHIMI)	195-217								
PVMAT_SENDH	MATRIX PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	195-217								
PVMAT_SEND2	MATRIX PROTEIN	SENDAI VIRUS (STRAIN Z)	195-217								
PVMAT_SSPVB	MATRIX PROTEIN	SUBACUTE SCLEROSING PANENCEPHALITIS VIRUS (STRAIN BIKEN)	283-309	314-338							
PVMAT_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	132-154	189-205	308-328						
PVMAT_SV5	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN W3)	98-114	132-148	308-335						
PVMAT_SVCV	MATRIX PROTEIN	SPRING VIREMIA OF CARP VIRUS (RHABDOVIRUS CARPIA)	141-167								
PVMAT_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS	122-143								
PVME1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	9-36	137-161	171-190						
PVME1_CVH22	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN 229E)	136-155								
PVME1_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	9-36	64-85	137-161						
PVME1_CVMJ3	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	10-37								
PVME1_CVMJN	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	10-37								
PVME1_CVPFS	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	174-193								
PVME1_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	169-193	174-193							
PVME1_CVPRM	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	174-193								
PVME1_CVTRE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	9-36	137-161	171-190						
PVME1_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6/82)	74-98								
PVME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	74-101								
PVME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE M42)	74-101								
PVME1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	74-98								
PVMEM_EBV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	131-157	178-203							
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	118-134	147-164	183-201						
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DH)	118-134	147-164	183-201						
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	118-134	147-164	183-201						
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	118-134	147-164	183-201						
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	118-134	147-164	183-201						
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	118-134	147-164	183-201						
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	293-318								
PVMP_FMVD	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DX5)	115-131	180-198							
PVMP_SCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-147	273-299							
PVMSA_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	201-228	269-295							
PVMSA_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	194-221	268-294							
PVMSA_HPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	157-184	231-257							
PVMSA_HPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	194-221	269-295							
PVMSA_HPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	209-236	271-295	380-395						
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	236-262	293-320							
PVMSA_HPBV0	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	11-28	70-96							
PVMSA_HPBV2	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	185-202	244-270							
PVMSA_HPBV4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	185-202	244-270							
PVMSA_HPBV9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	244-270								
PVMSA_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	174-191	233-259							
PVMSA_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	11-28	70-96							
PVMSA_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-259								
PVMSA_HPBVJ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	174-191	233-259							

PCGENE	P12CTL2JP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMSA_HPBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE	174-191	233-259							
PVMSA_HPBVN	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADR / STRAIN NC-1)	11-28	70-96							
PVMSA_HPBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	174-191	233-259							
PVMSA_HPBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PFDW294)	185-202	244-270							
PVMSA_HPBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	185-202	244-270							
PVMSA_HPBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	11-28	70-96							
PVMSA_HPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	174-191	233-259							
PVMSA_HPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	174-191	233-259							
PVMSA_HPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADYW)	174-191	233-259							
PVMSA_WHV1	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	207-234	269-293	378-393						
PVMSA_WHV59	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	212-239	274-298	383-398						
PVMSA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	212-239	274-298	383-398						
PVMSA_WHV8	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8	212-239	274-298	383-398						
PVMSA_WHV8I	PROB MAJOR SURFACE ANTIGEN PREC	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	212-239	274-298	383-398						
PVMSA_WHVW6	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS23)	125-149	234-249							
PVMT2_IAANN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	25-46								
PVMT2_IABAN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/BANGKOK/1/79)	25-46								
PVMT2_IAFOW	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	25-46								
PVMT2_IAFPR	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	25-46								
PVMT2_IAFPW	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	25-46								
PVMT2_IALE1	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	25-46								
PVMT2_IALE2	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	25-46								
PVMT2_IAMAN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	25-46								
PVMT2_IAPUE	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	25-46								
PVMT2_IASIN	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	25-46								
PVMT2_IAUDO	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	25-46								
PVMT2_IAWIL	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	25-46								
PVMT9_MYXVL	MT-9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	226-241								
PVN34_ROTBS	NONSTRUCTURAL PROTEIN NS34	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	334-351								
PVNBP_PVS5	10.7 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	21-36								
PVNB_INBBE	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	13-39								
PVNB_INBHK	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	13-39								
PVNB_INBLE	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	13-39								
PVNB_INBLN	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/179/86)	13-39								
PVNB_INBMD	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	13-39								
PVNB_INBMF	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/3/89)	13-39								
PVNB_INBOR	NB GLYCOPROTEIN	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	13-39								
PVNCS_ADVO	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	81-96	169-190							
PVNCS_AEDEV	NONCAPSID PROTEIN NS-1	AEDES DENSONUCLEOSIS VIRUS (STRAIN GKV 002 002) (AEDES DENS	675-690								
PVNCS_PAVHB	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	575-597								
PVNCS_PAVHH	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	140-165								
PVNS1_AHSV4	NONSTRUCTURAL PROTEIN NS1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	256-272								
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	31-50	114-137	167-192						
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	31-50	114-137	167-192						
PVNS1_IACAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CAMEL/MONGOLIA/82)	10-38								
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	31-50	114-137	167-192						
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	31-50	167-192							
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	28-47	164-189							
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	31-50	167-192							
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	28-47	164-189							
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	28-47	164-189							
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	31-50	114-137	167-192						
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50), AND(STRAIN A/	31-50	114-137	167-192						
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	31-50	167-192							
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	31-50	114-137	167-192						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	31-50	114-137	167-192						
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	31-50	167-192							

PCGENE	PIRCTLZIP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	31-50	167-192							
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	31-50	167-192							
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MYNAH/HANEDA-THAI/76)	28-47	164-189							
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	167-192								
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	31-50	167-192							
PVNS1_IAPI2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/264/78)	31-50	167-192							
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	31-50	167-192							
PVNS1_IAPU8	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	31-50	114-137	167-192						
PVNS1_IATK8	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/1492-B/8	31-50	167-192							
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	31-50	167-192							
PVNS1_IATKR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	31-50								
PVNS1_IATR8	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	28-47	164-189							
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	31-50	167-192							
PVNS1_IAUDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	31-50	114-137	167-192						
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	31-50	114-137	167-192						
PVNS1_IAZI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	31-50	167-192							
PVNS1_INCAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/ANN ARBOR/1/50)	222-248								
PVNS1_INCCA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	222-248								
PVNS2_BTV10	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	145-161	201-223							
PVNS2_BTV17	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	145-161	201-223							
PVNS2_BTV1S	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	145-161								
PVNS2_BTV1X	NONSTRUCTURAL PROTEIN NS2	BLUETONGUE VIRUS (SEROTYPE 10)	145-161								
PVNS2_EHDV2	NONSTRUCTURAL PROTEIN NS2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AL	145-161								
PVNS2_IAPU8	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	3-28								
PVNS2_IATR8	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	36-80								
PVNS3_PVM	NONSTRUCTURAL PROTEIN 3	PNEUMONIA VIRUS OF MICE	52-68								
PVNS3_CVPF5	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	177-201								
PVNS3_CVPPU	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	98-122								
PVNS3_CVPRM	NONSTRUCTURAL PROTEIN 3-1	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	177-201								
PVNS3_RSV	NONSTRUCTURAL PROTEIN NS3	RICE STRIPE VIRUS	16-40								
PVNS4_CVH22	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	84-100								
PVNS4_CVMS	NONSTRUCTURAL PROTEIN 4	MURINE CORONAVIRUS MHV (STRAIN S)	17-38								
PVNS4_CVPF5	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	4-31								
PVNS4_CVPPU	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAI	4-31								
PVNS4_CVPRM	NONSTRUCTURAL PROTEIN 4	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	4-31								
PVNS4_MSTV	NONSTRUCTURAL PROTEIN NS4	MAIZE STRIPE VIRUS	41-56								
PVNS4_RSV	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	41-56	60-82	152-167						
PVNS7_CVFI3	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	59-84								
PVNS7_FIPV	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	59-84								
PVNSC_PIIHB	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	76-92								
PVNSC_PIIHC	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	76-92								
PVNSC_PIIHD	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/73)	76-92	179-197							
PVNSC_PIIHE	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	76-92								
PVNST_CVBQ	33 KD NONSTRUCTURAL PROTEIN	BOVINE CORONAVIRUS (STRAIN QUEBEC)	88-109								
PVNST_INCGL	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	222-248								
PVNST_INCJH	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	222-248								
PVNST_INCMI	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	222-248								
PVNST_INCYA	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	222-248								
PVNST_PTPV	NONSTRUCTURAL PROTEIN NS-S	PUNTA TORO PHLEBOVIRUS	48-63								
PVNST_SFSV	NONSTRUCTURAL PROTEIN NS-S	SANDFLY FEVER SICILIAN VIRUS	16-34								
PVNST_UUK	NONSTRUCTURAL PROTEIN NS-S	UUKUNIEMI VIRUS	52-73	89-104							
PVNUA_PRVKA	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	756-777	1563-1583							
PVNUC_DHVII	NUCLEOPROTEIN	DHORI VIRUS (STRAIN INDIAN/1313/61)	123-139	297-324							
PVNUC_EBOV	NUCLEOPROTEIN	EBOLA VIRUS	159-176								
PVNUC_IAANA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUTA/PRIMORJE/695/76)	173-197	266-287							
PVNUC_IAANN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	173-197								
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	173-197								

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDGERIGAR/HOKKAIDO/1/77)	173-197								
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	173-197								
PVNUC_IACK0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	173-197								
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	173-197								
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/AUSTRALIA/749/80	173-197								
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	173-197								
PVNUC_IADCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	173-197								
PVNUC_IADE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	173-197								
PVNUC_IADE3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	173-197								
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/75)	173-197								
PVNUC_IADM3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MEMPHIS/928/74)	173-197								
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/MANITOBA/1/53)	173-197								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/31/76)	173-197								
PVNUC_IADU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	173-197								
PVNUC_IAEN5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/19/55)	173-197								
PVNUC_IAFOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	173-197								
PVNUC_IAFOW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	173-197								
PVNUC_IAFPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/DUTC	173-197								
PVNUC_IAFPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	173-197								
PVNUC_IAGRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	173-197								
PVNUC_IAGU1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/5/77)	173-197								
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	173-197								
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1824/78)	173-197								
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/1815/79)	173-197								
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/227/84)	173-197								
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/26/80)	173-197								
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	173-197								
PVNUC_IAHC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKOX/40)	173-197								
PVNUC_IAHJ1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	173-197								
PVNUC_IAHL0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	173-197								
PVNUC_IAHM1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIAMI/1/63)	173-197								
PVNUC_IAHO1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	173-197								
PVNUC_IAHO2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	173-197								
PVNUC_IAHPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	173-197								
PVNUC_IAHTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	173-197								
PVNUC_IAKIE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	173-197								
PVNUC_IALEN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	173-197								
PVNUC_IAMAA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/244/82)	173-197								
PVNUC_IAMAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	173-197								
PVNUC_IAMIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	173-197								
PVNUC_IANT6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	173-197								
PVNUC_IAOH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/83)	173-197								
PVNUC_IAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	173-197								
PVNUC_IAPUB	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	173-197								
PVNUC_IARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/	173-197								
PVNUC_IASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	173-197								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	173-197								
PVNUC_IASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	173-197								
PVNUC_IATE1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEAL/ICELAND/29/80)	173-197								
PVNUC_IATKN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/1661/81)	173-197								
PVNUC_IATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/7732/66)	173-197								
PVNUC_IATR5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	173-197								
PVNUC_IATRT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	173-197								
PVNUC_IATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/TEXAS/1/77)	173-197								
PVNUC_IAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	173-197								
PVNUC_IAUS3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	173-197								
PVNUC_IAVIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/68)	173-197								

PCGENE	PIRCTL2IP	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC_IAWHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/MAINE/328/84)	173-197								
PVNUC_IAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WHALE/PACIFIC OCEAN/19/76)	173-197								
PVNUC_IAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	173-197								
PVNUC_IA2J9	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/29/77)	173-197								
PVNUC_IA2J1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/41/49)	173-197								
PVNUC_IA2CA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/CAMBRIDGE/1/35)	173-197								
PVNUC_IA2DA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/DANDONG/9/83)	173-197								
PVNUC_IA2GE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/GERMANY/2/81)	173-197								
PVNUC_IA2H1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/6/76)	173-197								
PVNUC_IA2HJ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/12/82)	173-197								
PVNUC_IA2I1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30)	173-197								
PVNUC_IA2I2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/1976/31)	173-197								
PVNUC_IA2I3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/46)	173-197								
PVNUC_IA2IH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/ITALY/839/89)	173-197								
PVNUC_IA2JA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JANESBURG/42)	173-197								
PVNUC_IA2MA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/MAY/54)	173-197								
PVNUC_IA2NE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/NETHERLANDS/12/85)	173-197								
PVNUC_IA2OH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/OHIO/23/35)	173-197								
PVNUC_IA2W1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/57)	173-197								
PVNUC_IA2W2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/WISCONSIN/1/61)	173-197								
PVNUC_INBAC	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	234-258								
PVNUC_INBAD	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	234-258								
PVNUC_INBLE	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/LEE/40)	234-258								
PVNUC_INBSI	NUCLEOPROTEIN	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	234-258								
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	16-39	141-158							
PVNUC_MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	16-39	141-158							
PV001_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	189-204	242-262	336-358						
PV001_VARV	PROTEIN O1	VARIOLA VIRUS	189-204	242-262	336-358						
PVOR1_PVXV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	846-865								
PVOR1_NSMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS	409-424	990-1010							
PVOR1_PVSR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	87-104	986-1009	1251-1270	1893-1909					
PVOR1_PVSP	223 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	279-295								
PVOR1_PVX	165 KD PROTEIN	POTATO VIRUS X	128-153	234-256	306-322	1010-1030					
PVOR1_PVXCP	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	128-153	234-256	306-322	385-404,	1010-1030				
PVOR1_PVXXJ	165 KD PROTEIN	POTATO VIRUS X (STRAIN XJ)	128-153	234-256	306-322	1010-1030					
PVOR1_SMYEA	150 KD PROTEIN	OS STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	121-146	155-175							
PVOR1_WCMVM	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	121-146								
PVOR1_WCMVO	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	121-146	408-430							
PVP03_HSV5A	PROBABLE MEMBRANE ANTIGEN 3	HERPESVIRUS SAIMIRI (STRAIN 11)	424-446	462-486	551-575	579-595	1051-1072				
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-26	42-59							
PVP10_NPVOP	P10 PROTEIN	OROYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	4-31								
PVP10_NPVSE	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN US)	35-58								
PVP10_RBSDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS	31-49	52-77	105-129	195-214	260-283	504-528			
PVP10_WTV	NONSTRUCTURAL PROTEIN PNS10	WOUND TUMOR VIRUS (WTV)	90-107	265-291							
PVP14_EBV	PROBABLE MEMBRANE ANTIGEN P140	EPSTEIN-BARR VIRUS (STRAIN B95-8)	694-715	857-879	1124-1145						
PVP19_EBV	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	EPSTEIN-BARR VIRUS (STRAIN B95-8)		346-364							
PVP19_HCMVA	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	77-101	122-149	200-216						
PVP19_HSV5A	PROB CAPSID ASSEMBLY AND DNA MATUR PROTE	HERPESVIRUS SAIMIRI (STRAIN 11)	238-265								
PVP19_VZVD	CAPSID ASSEMBLY AND DNA MATUR PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	5-31								
PVP1_SSV1	STRUCTURAL PROTEIN VP1 PRECURSOR	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	8-35								
PVP21_AMCV	CORE PROTEIN P21	ARTICHOKE MOTTLED CRINKLE VIRUS	37-63								
PVP21_CNV	CORE PROTEIN P21	CUCUMBER NECROSIS VIRUS	40-65								
PVP21_CRV	CORE PROTEIN P21	CYMBIDIUM RINGSPOT VIRUS	40-63								
PVP21_TBSVC	CORE PROTEIN P21	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	40-63								
PVP23_HCMVA	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141-165	187-202	261-282						
PVP23_HSV11	CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	197-220								
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	206-232								

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PCGENE	FITCTL2IP	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP23_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-132								
PVP26_NPVAC	P26 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	12-31	58-76	117-141						
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	868-891	974-994							
PVP2_BTV10	OUTER CAPSID PROTEIN VP2.	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	361-381	399-424	564-586	829-849					
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	361-381	399-424	829-849						
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	362-382	420-438	617-632	657-676					
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS(SEROTYPE 17 / ISOLATE USA)	361-381								
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	420-438	634-681							
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-31	117-140	420-438	634-681					
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	153-168	229-252							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	301-317	334-360	522-543	673-690	764-789				
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	301-317	334-360	523-544	765-790					
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	309-325	342-363	532-553	674-700	774-799				
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	51-75	303-319	408-425	514-535	665-691				
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	34-57	219-240	302-318	333-361	523-544	674-700	765-790		
PVP30_MABVP	MINOR NUCLEOPROTEIN VP30	MARBURG VIRUS (STRAIN MUSOKE)	50-75								
PVP32_ASFB7	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	174-197								
PVP35_EBOV	POLYMERASE COMPLEX PROTEIN VP35	EBOLA VIRUS	233-256								
PVP35_MABVM	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN MUSOKE)	49-75	78-104							
PVP35_MABVP	POLYMERASE COMPLEX PROTEIN VP35	MARBURG VIRUS (STRAIN POPP)	49-75	78-104							
PVP35_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-304								
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	278-304								
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	279-305								
PVP38_HSVMG	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	255-270								
PVP38_HSVMN	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD11/75C/R2)	255-270								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	296-311								
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	107-134	214-240	295-316						
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4/STRAIN VACCINE)	65-83	126-147	215-230	845-862					
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10/ISOLATE USA)	123-144	212-227							
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17/ISOLATE USA)	123-144	212-227							
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1/ISOLATE AUSTRALIA)	123-144	212-227							
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	121-142	671-695							
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2/STRAIN AUS	121-142	675-695							
PVP3_RDV	MAJOR 116 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	89-108	340-360	387-393	690-717	742-768	748-768	960-975		
PVP3_ROTPC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	405-429								
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	401-425	426-444	512-536	796-822					
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	429-454								
PVP40_HSV11	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	141-168	472-492							
PVP40_HSVEB	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	50-67	95-119	483-504						
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	342-368								
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	506-528								
PVP40_MABVM	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN MUSOKE)	95-110								
PVP40_MABVP	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN POPP)	95-110								
PVP40_NPVBM	STRUCTURAL GLYCOPROTEIN P40	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	223-242	256-272							
PVP40_VZVD	CAPSID PROTEIN VP24	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	47-64								
PVP41_NPVAC	STRUCTURAL GLYCOPROTEIN GP41	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	229-248	262-278							
PVP41_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	483-508								
PVP43_ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	395-411	483-508							
PVP47_NPVAC	VIRAL TRANSCRIPTION REGULATOR P47	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	14-38								
PVP48_NPVOP	P48 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	136-157								
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	275-288								
PVP4B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	331-358								
PVP4B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)	331-358								
PVP4B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS	331-358								
PVP4_BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10/ISOLATE USA)	174-193	233-249	345-361						
PVP4_BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11/ISOLATE USA)	174-193	233-249	535-551						
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13/ISOLATE USA)	174-193	233-249	535-551						

PCGENE	P12CTL21P	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP4_BTV2A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	174-193	233-249	535-551						
PVP4_NCDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	483-508								
PVP4_RDV	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS	386-407	493-514	626-645						
PVP4_ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	483-508								
PVP4_ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	483-508								
PVP4_ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	483-508								
PVP4_ROTEH	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	226-250	483-508							
PVP4_ROTH1	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	181-207	234-249	482-507						
PVP4_ROTH3	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	181-207	234-249	482-507						
PVP4_ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	483-508								
PVP4_ROTHD	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	181-207	234-249	482-507						
PVP4_ROTHU	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN K8)	483-508	524-548							
PVP4_ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	76-91	181-207	234-249	482-507					
PVP4_ROTHL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	181-207	234-249	482-507						
PVP4_ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	181-207	234-249	482-507						
PVP4_ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)	181-208	235-250	483-508						
PVP4_ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	181-207	234-249	482-507						
PVP4_ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	181-207	234-249	482-507						
PVP4_ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	181-207	482-507							
PVP4_ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	181-207	482-507							
PVP4_ROTPS	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	235-250	483-508							
PVP4_ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	487-512								
PVP4_ROTPO	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	234-249	482-507							
PVP4_ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	235-250	483-508							
PVP4_ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	483-508								
PVP4_ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	483-508								
PVP4_ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	395-411	483-508							
PVP4_SBMV	P4 PROTEIN	SOUTHERN BEAN MOSAIC VIRUS	90-114								
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	192-215	416-438	498-519	564-597					
PVP5_BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	295-317	326-345	494-517						
PVP5_BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	295-317	326-345	494-517						
PVP5_BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	295-317	494-517							
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	87-102	295-317							
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-317								
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	295-317								
PVP5_RDV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS	265-284	622-639	690-715						
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	9-27	232-249	261-276						
PVP61_NPVAC	61 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	321-337	438-462							
PVP62_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	5-23	257-272							
PVP63_MDLDV	PROB NONSTRUCTURAL 34.5 KD PROTEIN	MAIZE ROUGH DWARF VIRUS	130-146								
PVP64_NPVOP	MAJOR ENV GLYCOPROTEIN PREC	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	81-99	235-252	286-313						
PVP67_NPVAC	MAJOR ENV GLYCOPROTEIN PREC	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	84-102	238-255							
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS	155-172								
PVP6_BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	5-23	228-245	257-272						
PVP6_BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	9-27	232-249	261-276						
PVP6_BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	204-221	233-248							
PVP6_WTV	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS	374-397								
PVP6_WTVNJ	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ)	374-397								
PVP74_NPVAC	P74 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	254-275								
PVP75_HSV8A	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	127-147								
PVP79_NPVAC	79 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	274-301	405-420	678-704						
PVP7_BTV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	197-222								
PVP7_EHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	205-222	301-323							
PVP7_RDV	NONSTRUCTURAL PROTEIN PNS7	RICE DWARF VIRUS	400-416								
PVP7_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	262-285								

BAD ORIGINAL

PCGENE	P11CTL21P	All Viruses (No Bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP80_NPVAC	CAPSID PROTEIN P80	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	98-123	638-660							
PVP87_NPVOP	CAPSID PROTEIN P87	OROYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	571-593								
PVP8_BTV10	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-120								
PVP8_BTV11	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-120								
PVP8_BTV13	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	104-120								
PVP8_BTV17	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-120								
PVP8_BTV1A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-120								
PVP8_BTV1S	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	104-120								
PVP8_BTV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	104-120								
PVP8_RDV	OUTER CAPSID PROTEIN P8 (	RICE DWARF VIRUS	374-400								
PVP8_RGDV	OUTER CAPSID PROTEIN P8	RICE GALL DWARF VIRUS	177-202	216-242	398-425						
PVP8_VACCC	STRUCTURAL PROTEIN VP8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	225-242								
PVP8_VACCV	STRUCTURAL PROTEIN VP8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	225-242								
PVP8_VARV	STRUCTURAL PROTEIN VP8 PRECURSOR	VARIOLA VIRUS	225-242								
PVP8_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	111-129	214-241	251-271	379-405					
PVP9_RDV	NONSTRUCTURAL PROTEIN PNS9	RICE DWARF VIRUS	51-72								
PVP9_RGDV	NONSTRUCTURAL PROTEIN S9	RICE GALL DWARF VIRUS	151-175								
PVPHE_NPVAC	39 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	145-166	225-245							
PVPHE_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	OROYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	122-144								
PVPRT_ADE12	ENDOPROTEASE	HUMAN ADENOVIRUS TYPE 12	161-181								
PVPRT_MMTVB	PROTEASE	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	42-63								
PVPRT_MPMV	PROTEASE	SIMIAN MASON-PFIZER VIRUS	80-99								
PVPRT_SMRVH	PROTEASE	SQUIRREL MONKEY RETROVIRUS	256-271								
PVPRT_SRV1	PROTEASE	SIMIAN RETROVIRUS SRV-1	80-99								
PVPU_HV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE HXB2)	3-27								
PVPU_HV1B3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	4-27								
PVPU_HV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	3-28								
PVPU_HV1BR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	3-27								
PVPU_HV1EL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	3-26								
PVPU_HV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	4-27								
PVPU_HV1JR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE)	3-28								
PVPU_HV1MA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-27								
PVPU_HV1MN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	3-20								
PVPU_HV1ND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	3-28								
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	3-27								
PVPU_HV1SI	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	3-28								
PVPU_HV1SC	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	3-28								
PVPU_HV1Z3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z3/CDC-Z34 ISOLATE)	3-28								
PVPU_JSRV	VPU PROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RET	24-45								
PVPX_HV2BE	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	10-32								
PVPX_HV2CA	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	10-32								
PVPX_HV2D1	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	10-32								
PVPX_HV2D2	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205_7)	9-31								
PVPX_HV2GI	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	10-32								
PVPX_HV2NZ	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z)	10-32								
PVPX_HV2RO	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	10-32								
PVPX_HV2SB	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	10-32								
PVPX_HV2ST	VPX PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	10-32								
PVPX_LDV	VPX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	145-165								
PVPX_SIVAI	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1) (S	66-84								
PVPX_SIVMI	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVMK	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVML	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	10-32								
PVPX_SIVS4	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SM14 ISOLATE) (SOOTY M	10-32								
PVPX_SIVSP	VPX PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJ/BC13 ISOLATE) (SOOTY MA	10-32								
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	290-312	904-929							
PVS05_ROTBR	NONSTRUCTURAL PROTEIN NCVP2	BOVINE ROTAVIRUS (STRAIN RF)	140-159	461-487							

PCGENE	P1:CTLEIP	All Viruses (No Bacteriophages)									
TYLE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVS05_ROTH1	NONSTRUCTURAL PROTEIN NCVP2	HUMAN ROTAVIRUS (STRAIN IGV-80-1)	140-157	428-450	457-473						
PVS05_ROTPC	NONSTRUCTURAL PROTEIN NS53	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	88-112								
PVS05_ROTS1	NONSTRUCTURAL PROTEIN NCVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	399-414								
PVS06_ROTBR	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN RF)	202-225								
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-85								
PVS06_ROTBU	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	202-225								
PVS06_ROTEF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	202-225								
PVS06_ROTEH	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	202-225								
PVS06_ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRU	22-40								
PVS06_ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	22-40								
PVS06_ROTH1	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	202-225								
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-85								
PVS06_ROTHS	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	202-225								
PVS06_ROTHW	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	202-225								
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64-85	314-340							
PVS06_ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	202-225								
PVS07_ROTBJ	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	131-155								
PVS08_ROTPC	GLYCOPROTEIN VP7 PRECURSOR	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	117-136								
PVS08_ROTS1	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	274-295								
PVS09_ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	131-155								
PVS09_ROTBA	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	131-155								
PVS09_ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B223)	131-155								
PVS09_ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KK3)	131-155								
PVS09_ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	131-155								
PVS09_ROTCT	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	134-158								
PVS09_ROTEL	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	131-155								
PVS09_ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	205-232								
PVS09_ROTH4	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	131-155	197-212							
PVS09_ROTHA	GLYCOPROTEIN VP7 (	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	197-212								
PVS09_ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	197-212								
PVS09_ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	197-212								
PVS09_ROTHL	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	131-155	197-212							
PVS09_ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	131-155	197-212							
PVS09_ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	131-155	197-212							
PVS09_ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	131-155								
PVS09_ROTHR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)	131-155								
PVS09_ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	197-212								
PVS09_ROTHV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	197-212								
PVS09_ROTHW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	131-155	197-212							
PVS09_ROTPS	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	131-155	197-212							
PVS09_ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	131-155								
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	197-212								
PVS09_ROTPM	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BMI-1)	197-212								
PVS09_ROTRH	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	131-155								
PVS09_ROTS1	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	131-155								
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRU	136-153								
PVSH_HRSVA	SMALL HYDROPHOBIC PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	16-41								
PVSH_MUMP1	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN SBL-1), AND MUMPS VIRUS (STRAIN SBL)	7-29								
PVSH_MUMP2	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 2 & 6)	7-29								
PVSH_MUMP4	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 4)	7-29								
PVSH_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUYAMA)	10-29								
PVSH_MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	7-29								
PVSH_MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	7-29								
PVSH_MUMPJ	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	7-29								
PVSH_MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	7-29								
PVSH_MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	6-29								
PVSH_MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	10-29								

SUBSTITUTE SHEET (RULE 26)

ACCESSION	PROTEIN	All Viruses (No Bacteriophages)								
FILE NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PY5H_MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JW)	3-29							
PY5H_MUMPT	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN TAKAHASHI)	10-29							
PY5H_MUMPU	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	10-29							
PY5I1_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	110-136							
PY5I3_REOVD	SIGMA 3 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	132-170							
PY5I3_REOVJ	SIGMA 3 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DJ/JONES)	132-170							
PY5I3_REOVL	SIGMA 3 PROTEIN	REOVIRUS (TYPE 3 / STRAIN LANG)	132-170							
PY5I3_REOVL	SIGMA 1-3 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	79-101							
PY5I3_HEVBU	STRUCTURAL PROTEIN 3 PRECURSOR	HEPATITIS E VIRUS (STRAIN BURMA)	292-311							
PY5I3_HEVMX	STRUCTURAL PROTEIN 3 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO)	292-311							
PY5I3_HEVMY	STRUCTURAL PROTEIN 3 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR)	292-311							
PY5I3_HEVPA	STRUCTURAL PROTEIN 3 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN)	292-311							
PY5I3_HEVUH	STRUCTURAL PROTEIN 3	HEPATITIS E VIRUS (ISOLATE BJESUS)	292-311							
PY5J_MYXVL	TUMOR NECROSIS FACTOR SOL RECEPTOR PREC	MYXOMA VIRUS (STRAIN LAUSANNE)	160-179							
PY5J_SFVSA	TUMOR NECROSIS FACTOR SOL RECEPTOR PREC	SHOPE FIBROMA VIRUS (STRAIN KASZA)	261-283							
PY5J_CJVVI	PROTEIN 5J A	CAPRIPOXVIRUS (STRAIN NS-1)	270-289							
PY5K_SFVSA	T4 PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	116-138							
PY5L_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BAAR VIRUS (STRAIN B95-8)	123-148							
PY5L_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	117-139	166-192	227-250					
PY5L_HSV11	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	409-430							
PY5L_HSV2U	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	363-380	673-688						
PY5L_HSV2S	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	260-278							
PY5L_HSV31	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1	364-381							
PY5L_HSV3A	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	369-393	736-781						
PY5L_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	218-241							
PX_WHV5	PROTEIN X	GROUND SQUIRREL HEPATITIS VIRUS	372-389							
PX_WHV1	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 1	64-85							
PX_WHV9	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 9	64-85							
PX_WHV7	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 7	64-85							
PX_WHV8	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 8	64-85							
PX_WHV11	PROTEIN X	WOODCHUCK HEPATITIS VIRUS 11 (INFECTIOUS CLONE)	64-85							
PX_WHVW6	PROTEIN X	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PWS2)	64-85							
PY10A_ADE07	HYPOTHETICAL 10.4 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	51-73							
PY10B_SSV1	HYPOTHETICAL 10.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	66-90							
PY10K_KSV8	HYPOTHETICAL 10.9 KD PROTEIN	HAZE STREAK VIRUS (SOUTH AFRICAN ISOLATE)	24-47							
PY11B_SSV1	HYPOTHETICAL 11.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	24-47							
PY11K_PAEV	HYPOTHETICAL 11.5 KD PROTEIN	PANICUM STREAK VIRUS	42-59							
PY11K_BNYVD	RNA-3 HYPOTHETICAL 11.6 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE G1)	28-52							
PY11K_CMV31	HYPOTHETICAL 12.4 KD PROTEIN	CYMBIDIUM MOSAIC VIRUS (STRAIN SINGAPORE)	15-42							
PY11J_ADE03	HYPOTHETICAL PROTEIN IX-137	HUMAN ADENOVIRUS TYPE 3	8-30							
PY11K_CLVK	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 144)	28-50							
PY11K_CLVN	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	34-55							
PY11K_TYLCV	HYPOTHETICAL 13.3 KD PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MAINANDE)	10-27							
PY11K_TYLCY	HYPOTHETICAL 13.4 KD PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	34-55							
PY11J_ADE07	HYPOTHETICAL 14.1 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	108-132							
PY11K_CSMV	HYPOTHETICAL 14.1 KD PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	34-50							
PY11K_SSV1	HYPOTHETICAL 14.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-123	141-162						
PY20A_ADE07	HYPOTHETICAL 20.6 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73							
PY23K_BNYVF	RNA-3 HYPOTHETICAL 23.7 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188							
PY29K_NPVAC	HYPOTHETICAL 29.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	90-106							
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90							
PY31K_SSV1	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142							
PY60_SSV1	HYPOTHETICAL 60 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	33-44							
PY7K4_VACCV	HYPOTHETICAL 7.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	21-36							
PY7K_MEASH	HYPOTHETICAL 7 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-23							
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120							
PY81K_SSV1	HYPOTHETICAL 81.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-105	135-173	343-365	657-675	764-784			

BAD ORIGINAL

PCGENE	P12CTLZIP	All Viruses (No Bacteriophages)									
ITLE NAME	PROTEIN	VIRUS	AREA 1	AREA 3	AREA 5	AREA 4	AREA 8	AREA 6	AREA 7	AREA 8	AREA 9
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27								
PY97_ADE07	HYPOTHETICAL 9 7 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	54-77								
PY9K2_SSV1	HYPOTHETICAL 9 2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-41	62-77							
PYAL1_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220								
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	354-374								
PYB07_FOWPM	HYPOTHETICAL BAMHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121								
PYB09_FOWPM	HYPOTHETICAL BAMHI-ORF9 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67								
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100								
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	154-169							
PYBL3_SFV3L	BEL-3 PROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	113-128								
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	52-78								
PYDH1_HSVSC	HYP 28 7 KD PROTEIN IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-230								
PYDH9_HSVSC	HYP 9 3 KD PROTEIN IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90								
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222								
PYGA1_HSVMB	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	175-190								
PYGA1_HSVMM	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	175-190								
PYHL4_HCMVA	HYPOTHETICAL PROTEIN HRLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121								
PYHU_VACCV	HYP HOST RANGE 27 4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	86-102								
PYIO2_CVMA5	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONA VIRUS MHV	141-156								
PYIO8_CVMI	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONA VIRUS MHV	141-156								
PYIO8_CVMS	HYP PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONA VIRUS MHV	7-33								
PYKR3_EBV	HYPOTHETICAL BKRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90								
PYL12_ADE41	HYPOTHETICAL 8 0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	53-73								
PYM03_EBV	BMRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	330-350					
PYMSP_IRV22	HYPOTHETICAL 15 9 KD PROTEIN	SIMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 23)	23-46								
PYOR1_ADE01	HYPOTHETICAL PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	59-80								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83								
PYOR1_TTV1	HYPOTHETICAL 7 9 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-40								
PYOR3_COYMV	HYPOTHETICAL 13 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	23-49								
PYOR3_EAV	HYPOTHETICAL 25 6 KD PROTEIN	EQUINE ARTERITIS VIRUS	165-192								
PYOR3_LELV	HYPOTHETICAL 28 4 KD PROTEIN	LELYSTAD VIRUS	196-212								
PYOR3_LVX	HYPOTHETICAL 11 8 KD PROTEIN	LILY VIRUS X	71-92								
PYOR3_NMV	HYPOTHETICAL 14 KD PROTEIN	NARCISSUS MOSAIC VIRUS	7-30								
PYOR3_PVX	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X	11-34								
PYOR3_PVXCP	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	11-34								
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	9-29								
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31								
PYOR5_ADE01	HYPOTHETICAL 31 5 KD PROTEIN	AVIAN ADENOVIRUS GAL1 (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86								
PYOR5_EAV	HYPOTHETICAL 28 7 KD PROTEIN	EQUINE ARTERITIS VIRUS	136-158								
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26								
PYORJ_TTV1	HYPOTHETICAL 16 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32								
PYORL_TTV1	HYPOTHETICAL 16 5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-39								
PYORM_TTV1	HYPOTHETICAL 38 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256							
PYORP_TTV1	HYPOTHETICAL 20 2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	2-25	104-126							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126							
PYP47_NPVAC	HYPOTHETICAL 43 3 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234								
PYP62_NPVOP	HYPOTHETICAL 12 2 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	82-108								
PYP63_NPVOP	HYPOTHETICAL 40 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	27-54	215-230							
PYP7B_TNVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31								
PYP04_NPVLD	HYPOTHETICAL 8 5 KD PROTEIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35								
PYRF1_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	42-66								
PYRF2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	55-74								
PYRF3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	32-56								
PYRP1_IRV6	REPETITIVE PROTEIN ORF1	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	20-43								
PYRP4_IRV6	REPETITIVE PROTEIN ORF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69								
PYRP5_IRV6	REPETITIVE PROTEIN ORF5	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285						

PCGENE	P12CTLZIP	All Viruses (No Bacteriophages)										
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9	
PYRA1_EBV	HYPOTHETICAL BARF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-223									
PYRA3_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182									
PYSA1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113									
PYTA1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401									
PYUB2_NPVOP	HYPOTHETICAL 24.0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	133-152									
PYVAB_VACCC	HYPOTHETICAL 18.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-99	140-156								
PYVAF_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68								
PYVAL_VACCV	HYPOTHETICAL 7.9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	21-43									
PYVAT_VACCV	HYPOTHETICAL 8.9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	28-46									
PYVBE_VACCV	HYPOTHETICAL 10.3 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	9-28									
PYVBO_VACCC	HYPOTHETICAL 11.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-54									
PYVCA_VACCC	HYPOTHETICAL 8.0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35									
PYVD2_VACCV	HYPOTHETICAL 8.6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	5-26	36-52								
PYVDA_VACCC	HYPOTHETICAL 9.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-38	44-64								
PYVDA_VACCV	HYPOTHETICAL 9.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	3-18	22-38	44-64							
PYVFA_VACCC	HYPOTHETICAL 7.1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-67									
PYVF7_VACCC	HYPOTHETICAL 8.8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42									
PYVGA_VACCC	HYPOTHETICAL 14.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-127									
PYVKB_VACCC	HYPOTHETICAL 9.0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-70									
PYZL3_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-166									
PY14K_CSMV	HYPOTHETICAL 14.5 KD PROTEIN	CHLORUS STRIATE MOSAIC VIRUS	54-80									
PY18K_SSV1	HYPOTHETICAL 18.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-125	141-162								
PY20G_ADE07	HYPOTHETICAL 20.6 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73									
PY25K_BNYVV	RNA-3 HYPOTHETICAL 24.7 KD PROTEIN	BEET NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188									
PY29K_NPVAC	HYPOTHETICAL 29.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	90-106									
PY2_SOCMV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90									
PY32K_SSV1	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142									
PY6K0_SSV1	HYPOTHETICAL 6.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	23-44									
PY7K4_VACCV	HYPOTHETICAL 7.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	21-36									
PY7K_MEASH	HYPOTHETICAL 7 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-25									
PY7_SOCMV	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120									
PY85K_SSV1	HYPOTHETICAL 85.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-105	155-173	543-565	657-675	764-784					
PY8_SOCMV	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27									
PY97_ADE07	HYPOTHETICAL 9.7 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	54-77									
PY9K2_SSV1	HYPOTHETICAL 9.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-41	62-77								
PYAL1_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220									
PYB01_FOWPM	HYPOTHETICAL BAMHI-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	354-374									
PYB07_FOWPM	HYPOTHETICAL BAMHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121									
PYB09_FOWPM	HYPOTHETICAL BAMHI-ORF9 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67									
PYB10_FOWPM	HYPOTHETICAL BAMHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100									
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	154-169								
PYBL2_SFV3L	BEL-2 PROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	113-128									
PYBL3_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	52-78									
PYDH1_HSV8C	HYPOTHETICAL 28.7 KD PROTEIN IN DHFR 5'REGIO	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-230									
PYDH3_HSV8C	HYPOTHETICAL 9.3 KD PROTEIN IN DHFR 5'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90									
PYEC4_EBV	HYPOTHETICAL EC-BLF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222									
PYGA1_HSVMB	HYPOTHETICAL 23.6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	175-190									
PYGA1_HSVMM	HYPOTHETICAL 23.6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	175-190									
PYHL4_HCMVA	HYPOTHETICAL PROTEIN HHLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121									
PYH3J_VACCV	HYPOTHETICAL HOST RANGE 27.4 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	88-102									
PYI02_CVMA5	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156									
PYI0R_CVMI	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	141-156									
PYI0R_CVMS	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONAVIRUS MHV	7-33									
PYKB3_EBV	HYPOTHETICAL BKRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90									
PYL12_ADE41	HYPOTHETICAL 8.0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	53-73									
PYM03_EBV	BMRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	330-350						
PYMSP_IRV22	HYPOTHETICAL 15.8 KD PROTEIN	SIMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 22)	23-46									

SUBSTITUTE SHEET (RULE 26)

PCGENE	P12CTL21P	All Viruses (No Bacteriophages)									
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYOR1_ADEGI	HYPOTHETICAL PROTEIN	AVIAN ADENOVIRUS GALI (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	59-80								
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83								
PYOR1_TTV1	HYPOTHETICAL 7 9 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-40								
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	23-49								
PYOR2_EAV	HYPOTHETICAL 25 6 KD PROTEIN	EQUINE ARTERITIS VIRUS	165-192								
PYOR2_LELV	HYPOTHETICAL 28 4 KD PROTEIN	LELYSTAD VIRUS	196-212								
PYOR2_LVX	HYPOTHETICAL 11 8 KD PROTEIN	LILY VIRUS X	71-92								
PYOR2_NMV	HYPOTHETICAL 14 KD PROTEIN	NARCISSUS MOSAIC VIRUS	7-30								
PYOR2_PVX	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X	11-34								
PYOR2_PVXCP	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	11-34								
PYOR2_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	9-29								
PYOR2_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31								
PYOR5_ADEGI	HYPOTHETICAL 31 5 KD PROTEIN	AVIAN ADENOVIRUS GALI (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86								
PYOR5_EAV	HYPOTHETICAL 28 7 KD PROTEIN	EQUINE ARTERITIS VIRUS	139-158								
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26								
PYOR7_TTV1	HYPOTHETICAL 16 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32								
PYOR8_TTV1	HYPOTHETICAL 16 5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-30								
PYOR9_TTV1	HYPOTHETICAL 38 6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256							
PYORP_TTV1	HYPOTHETICAL 20 2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115								
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	2-25	104-126							
PYP24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126							
PYP47_NPVAC	HYPOTHETICAL 43 5 KD PROTEIN IN P47 5'REGION	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234								
PYP62_NPVOP	HYPOTHETICAL 12 2 KD PROTEIN IN P6 5 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	82-108								
PYP63_NPVOP	HYPOTHETICAL 40 0 KD PROTEIN IN P6 5 5'REGION	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	27-54	215-230							
PYP7B_TNVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31								
PYP04_NPVLD	HYPOTHETICAL 8 5 KD PROTEIN IN POL 3'REGION	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35								
PYRF1_HSV6Q	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	42-66								
PYRF2_HSV6Q	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	55-74								
PYRF3_HSV6Q	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	32-56								
PYRJ1_IIV6	REPETITIVE PROTEIN ORF1	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	20-43								
PYRJ4_IIV6	REPETITIVE PROTEIN ORF4	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69								
PYRJ5_IIV6	REPETITIVE PROTEIN ORF5	CHILO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285						
PYRR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-223								
PYRR3_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYUB3_NPVOP	HYPOTHETICAL 24 0 KD PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP	133-152								
PYVAE_VACCC	HYPOTHETICAL 18 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-99	140-156							
PYVAF_VACCC	HYPOTHETICAL 8 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68							
PYVAL_VACCV	HYPOTHETICAL 9 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	21-43								
PYVAT_VACCV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	28-46								
PYVBE_VACCV	HYPOTHETICAL 10 3 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	9-28								
PYVBO_VACCC	HYPOTHETICAL 11 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-54								
PYVCA_VACCC	HYPOTHETICAL 8 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35								
PYVD2_VACCV	HYPOTHETICAL 8 6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE	5-26	36-52							
PYVDA_VACCC	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-38	44-64							
PYVDA_VACCV	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	3-18	22-38	44-64						
PYVFA_VACCC	HYPOTHETICAL 7 1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-67								
PYVFF_VACCC	HYPOTHETICAL 8 8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42								
PYVOA_VACCC	HYPOTHETICAL 14 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-127								
PYVR8_VACCC	HYPOTHETICAL 9 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-70								
PYZL2_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-166								

TABLE XIV

SEARCH RESULTS SUMMARY

FOR P23TLZIPC MOTIF

PCGENE	PIRCTL2IP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PPOL3_TBRVS	RNA3 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S) (TBRV)	817-851	1041-1077					
PPOL3_TRSVR	RNA3 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY) (TOMRSV)	316-347						
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27) (BEV)	1833-1866	2001-2037					
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	102-135	1650-1678	3220-3248				
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	102-135	1560-1588	3130-3158				
PPOLG_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	226-255						
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	1120-1157						
PPOLG_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A22 (ECHO 9 VIRUS) (EC-9-V)	67-99						
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	1601-1633						
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	1582-1614						
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	1585-1617						
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	1583-1615						
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	835-868	1585-1617					
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	1111-1145	1485-1519	2401-2434				
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	1112-1146						
PPOLG_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	61-95	1112-1146					
PPOLG_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	61-95	1112-1146					
PPOLG_DEN2D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	61-95						
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	61-95	1112-1146					
PPOLG_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	364-398						
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/S1)	61-95	1112-1146					
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974	832-866						
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	61-95	2399-2432					
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	60-94						
PPOLG_ECHG	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	774-806						
PPOLG_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1194-1226	1463-1501					
PPOLG_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETOGENIC)	1196-1228	1465-1503					
PPOLG_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGENIC)	1196-1228	1465-1503					
PPOLG_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61) (APHTHOVIRUS A)	1036-1064	1098-1133	1167-1199	1465-1501			
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12) (APHTHOVIRUS A)	1036-1074	1098-1133	1167-1199	1465-1501			
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS O1K AND O1BFS)	1098-1133	1167-1199	1465-1501				
PPOLG_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1) (HCV)	1640-1670						
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT) (SWINE FEVER VIRUS)	1363-1397	1560-1588	3131-3159				
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA) (SWINE FEVER VIRUS)	102-135	1560-1588	3131-3159				
PPOLG_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK) (HCV)	1640-1670						
PPOLG_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE H) (HCV)	1640-1670						
PPOLG_HCVH4	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HCV-476) (HCV)	254-291						
PPOLG_HCVH6	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J6) (HCV)	711-742						
PPOLG_HCVH8	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-J8) (HCV)	711-742	1893-1924					
PPOLG_HCVJA	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE JAPANESE) (HCV)	1640-1670						
PPOLG_HCVJT	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE HC-JT) (HCV)	1640-1670						
PPOLG_HCVTW	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE TAIWAN) (HCV	1640-1670						
PPOLG_HPAV2	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 24A)	1514-1550	2068-2099					
PPOLG_HPAV4	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 43C)	1514-1550	2068-2099					
PPOLG_HPAV8	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN 18F)	1514-1550	2068-2099					
PPOLG_HPAV11	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HM-175)	1515-1551	2069-2100					
PPOLG_HPAVL	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN LA)	1515-1551	2069-2100					
PPOLG_HPAVM	GENOME POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MBB)	1515-1551	2069-2100					
PPOLG_HPAV5	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	831-868	1517-1553					
PPOLG_HRV14	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 14 (HRV-14)	1094-1132	2005-2041					
PPOLG_HRV1B	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 1B (HRV-1B)	1453-1485	1816-1849	1983-2019				
PPOLG_HRV2	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 2 (HRV-2)	1446-1475	1809-1842	1976-2012				
PPOLG_HRV89	GENOME POLYPROTEIN	HUMAN RHINOVIRUS 89 (HRV-89)	1460-1492	1823-1856	1990-2026				
PPOLG_HJEV7	GENOME POLYPROTEIN	HUMAN ENTEROVIRUS 70 (STRAIN J670/71)	1108-1145						
PPOLG_IDDVO	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OH)	222-260						
PPOLG_JAEV1	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	61-95	1233-1269	1516-1549	2779-2813	3274-3311		
PPOLG_JAEVS	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA(V))	61-95	1233-1269	1516-1549	2779-2813	3274-3311		

BAD ORIGINAL

PCGENE	PRODUCT.ZIP	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6
ENTRY NAME	PROTEIN	VIRUS						
PPOLG_JAEVI	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN TAO/1983)	61-95	1233-1269	1516-1549	2778-2813	3274-3311	
PPOLG_JAEVN	GENOME POLYPROTEIN	JAPANESE ENCEPHALITIS VIRUS (STRAIN NAKAYAMA)	1161-1197					
PPOLG_KUNIN	GENOME POLYPROTEIN	KUNJIN VIRUS (STRAIN MRM61C)	61-95	581-594	1375-1412			
PPOLG_LANVT	GENOME POLYPROTEIN	LANGAT VIRUS (STRAIN TP21)	1153-1188	1216-1251	2230-2264	2764-2798	3093-3132	
PPOLG_MCEA	GENOME POLYPROTEIN	MOSQUITO CELL FUSING AGENT (CFA FLAVIVIRUS)	1174-1208	1230-1259				
PPOLG_MDMV	GENOME POLYPROTEIN	MAIZE DWARF MOSAIC VIRUS (MDMV)	322-351					
PPOLG_MVEV	GENOME POLYPROTEIN	MURRAY VALLEY ENCEPHALITIS VIRUS	61-95	1303-1342				
PPOLG_ONV	GENOME POLYPROTEIN	ORNITHOGALUM MOSAIC VIRUS	344-376					
PPOLG_PEATVC	GENOME POLYPROTEIN	PEPPER MOTTLE VIRUS (CALIFORNIA ISOLATE) (PEMV)	816-859	1086-1124				
PPOLG_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1121-1158					
PPOLG_POLIS	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN SABIN)	1123-1159					
PPOLG_POLIL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN LANSING)	1120-1157					
PPOLG_POLIW	GENOME POLYPROTEIN	POLIOVIRUS TYPE 2 (STRAIN W-2)	1120-1157					
PPOLG_POLIJ	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAIN 2121)	1118-1156					
PPOLG_POLJL	GENOME POLYPROTEIN	POLIOVIRUS TYPE 3 (STRAINS P/LEON/37 AND P/LEON 12A1B)	1119-1156					
PPOLG_PPVD	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN D) (PPV)	2960-2991	3084-3113				
PPOLG_PPVEA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN EL AMAR) (PPV)	1337-1368	1461-1490				
PPOLG_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT) (PPV)	2944-2975	3068-3097				
PPOLG_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC) (PPV)	2959-2990	3083-3112				
PPOLG_PSBMV	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DP01)	931-966	1411-1445	3149-3178			
PPOLG_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN) (PVY)	1302-1336	1004-1033				
PPOLG_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N) (PVY)	1102-1136					
PPOLG_PVYVI	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121) (PYFV)	230-262	1110-1139	1901-1931			
PPOLG_SBMVN	GENOME POLYPROTEIN	SOYBEAN MOSAIC VIRUS (STRAIN N)	245-274					
PPOLG_STEVN	GENOME POLYPROTEIN	ST. LOUIS ENCEPHALITIS VIRUS (STRAIN MSI-7)	61-95	1301-1331				
PPOLG_SUMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	307-336					
PPOLG_SVDVJI	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN UKG27/72)	1585-1617					
PPOLG_TBEVS	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFJIN) (TBEV)	835-869	1157-1188	2166-2198	3093-3130		
PPOLG_TEVW	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (TEV)	1157-1188	2166-2198	3093-3122			
PPOLG_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS (TEV)	837-865	2998-3023				
PPOLG_TMEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN/VRI/G)	1074-1102	1193-1221	1470-1508	1908-1939		
PPOLG_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	1017-1100	1191-1219	1448-1506	1906-1937		
PPOLG_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDVII)	1074-1102	1193-1221	1470-1508	1908-1939		
PPOLG_TUAV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS (TVMV)	1333-1602					
PPOLG_WNV	GENOME POLYPROTEIN	WATARABALON MOSAIC VIRUS (STRAIN NI)	3008-3111					
PPOLG_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	958-987					
PPOLG_YEFV	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	61-95	531-560	1272-1309			
PPOLG_YEFVI	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	1157-1186	1218-1266	1495-1531	2908-2940	3092-3127	
PPOLG_ZYMV	GENOME POLYPROTEIN	ZUCCHINI YELLOW MOSAIC VIRUS (ZYMV)	1153-1186	1218-1266	1495-1531	2908-2940	3092-3127	
PPVHH_PVMV	GENOME POLYPROTEIN	PEA MOSAIC VIRUS (STRAIN P1)	126-158					
PPVH_WMV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS 2	1132-1166					
PPVN_LEVVT	NONSTRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	244-277					
PPVN_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CH/6/81) (FCV)	617-648	1416-1448				
PPVN_FCVF4	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN JAPANESE F4) (FCV)	327-365					
PPVN_FCVF9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9) (FCV)	306-333					
PPVN_HAVHM	NON-STRUCTURAL POLYPROTEIN	HEPATITIS A VIRUS (STRAIN HUMAN) (HAV)	801-841					
PPVN_HEPAM	NON-STRUCTURAL POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MEXICO) (HAV)	1618-1652					
PPVN_HEPAY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS A VIRUS (STRAIN MYANMAR) (HAV)	1618-1650					
PPVN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	1618-1653					
PPVN_MIDOV	NONSTRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	1617-1651					
PPVN_ONNVG	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU) (ONN)	23-57					
PPVN_RUBV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (RHDV)	1144-1180	1804-1839				
PPVN_SFV	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	299-337	1342-1394				
PPVN_SINNA	NONSTRUCTURAL PVN.YPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1146-1175	1406-1441				
PPVN_SINSH	NONSTRUCTURAL PVN.YPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1454-1486	1454-1486				

BAD ORIGINAL

PCT:I.NE.	PIXCTIZIP	AN Viruses (as bacteriophages)							
GLE.FAMI	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PPOL_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	524-956						
PPOL_EEEV1	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA3)(TEN BROECK))	525-551						
PPOL_VEEV	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1201-1339						
PPOL_EEVV	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1201-1339						
PPOL_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU) (ONN)	1150-1182	1201-1335					
PPOL_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092) (RRV)	1216-1350						
PPOL_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48) (RRV)	1216-1350						
PPOL_SFV	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1215-1351						
PPOL_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO/STRAIN EOSTYN 81.5)	1197-1333						
PPOL_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	1197-1333						
PPOL_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	1188-1324						
PPOL_BIV06	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106) (BIV)	242-371						
PPOL_BIV17	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	242-371						
PPOL_BLVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE) (BLV)	143-274						
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK) (CAEV)	206-340						
PPOL_COYNV	PUTATIVE POLYPROTEIN	CORNELINA YELLOW MOTTLE VIRUS (COYNV)	1224-1267	1484-1518	1750-1788	1805-1831			
PPOL_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369) (EIAV)	166-198	508-539					
PPOL_EIAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	166-198	508-539					
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	166-198	505-538					
PPOL_FOAMV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	126-134						
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	348-378						
PPOL_HTLIA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK) (HTLV-I)	637-668						
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE) (HTLV-I)	637-668						
PPOL_HIVM2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE) (HIV-1)	311-364	500-537					
PPOL_HIVBI	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HIV-1)	343-376	512-549					
PPOL_HIVBA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE) (HIV-1)	343-376	512-549					
PPOL_HIVEL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (HIV-1)	330-363	499-536					
PPOL_HIVH2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HIV-1)	311-364	500-537					
PPOL_HIVJR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSF ISOLATE) (HIV-1)	335-368	504-541					
PPOL_HIVMA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (HIV-1)	330-363						
PPOL_HIVNH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NH ISOLATE) (HIV-1)	334-367	503-540					
PPOL_HIVNY5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE) (HIV-1)	311-364	500-537					
PPOL_HIVND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HIV-1)	330-363	499-536					
PPOL_HIVOY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE) (HIV-1)	311-364	500-537					
PPOL_HIVPV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV2) ISOLATE) (HIV-1)	343-376	512-549					
PPOL_HIVRU	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/ARIAT ISOLATE) (HIV-1)	330-363	499-536					
PPOL_HIVUG	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE	330-363	499-536					
PPOL_HIVZ2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-Z34 ISOLATE) (HIV-1)	330-363	499-536					
PPOL_HIVCA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2) (HIV-2)	353-386						
PPOL_HIVN2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z) (HIV-2)	353-386						
PPOL_HIVRO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	354-387	---					
PPOL_IRIA	PUTATIVE POL PROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE (IAP-IIIB)	460-496						
PPOL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	186-220						
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	636-667						
PPOL_OMVV5	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVV)	61-91	102-130	182-216	296-331			
PPOL_RTBV	POL POLYPROTEIN	RETE TUMORIGENIC BOVINE VIRUS (RTBV)	288-324	391-419	(1995-1411				
PPOL_RTBVP	POL POLYPROTEIN	RETE TUMORIGENIC BOVINE VIRUS (ISOLATE PHILIPPINES) (RTBV)	288-324	391-419	(1995-1411				
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1 / STRAIN LK3) (SFV-3)	337-365						
PPOL_SIVCP	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCPZ) (SIV	335-388	524-561					
PPOL_SIVMM	POLYMERASE POLYPROTEIN	SOOTY MANGABEY CYTOPATHIC SHUTTLE VIRUS	17-35	58-86					
PPOL_SRV1	POL POLYPROTEIN	SIMIAN RETROVIRUS SRV-1	636-681						
PPOL_VILV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	80-117	201-235	313-350				
PPOL_VILV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 7 CLONE LV1-1K51)	80-117	317-350					
PPOL_VILV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 7 CLONE LV1-1K53)	80-117	201-235	313-350				
PPZ1_HSVSC	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 07 STRAIN GS)	66-91						
PPTP_MPVAC	PROTEIN-TYROSINE PHOSPHATASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	53-81						

BAD ORIGINAL

PUGENE FILENAME	PJECTLIP PROTEIN	All Viruses (no bacteriophage) VIRUS	AREA1	AREA1	AREA1	AREA1	AREA2	AREA2	AREA2	AREA2
PREP_CSV	REPEAT ELEMENT PROTEIN	CAMPOLETIS SONORENSIS VIRUS (CSV)	113-149							
PREP_BIV2	REPEAT ELEMENT PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	74-109							
PREV_EIAV9	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1169) (EIAV)	44-79							
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	44-79							
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	74-109							
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE) (SIV-AGM)	25-62							
PRIR1_ASFM2	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1) (ASFV)	610-646							
PRIR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	279-311	393-430	449-477					
PRIR1_HSVEB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	60-92	393-431						
PRIR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VACCINIA VIRUS (STRAIN COPENHAGEN)	203-235							
PRIR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VACCINIA VIRUS (STRAIN WR)	203-235							
PRIR1_VARV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VARIOLA VIRUS	203-235							
PRIR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LARGE CH	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	34-71	321-354	418-516					
PRNIL_AVEVA	RNIL SERINE/THREONINE-PROTEIN KINASE TRANSFORM	AVIAN ROUS-ASSOCIATED VIRUS TYPE 1	149-177							
PRNIL_AVIII	RNIL SERINE/THREONINE-PROTEIN KINASE TRANSFORM	AVIAN RETROVIRUS IC10	133-161							
PRPM_VACCV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION SPECIFI	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	199-427							
PRPM_VARV	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION SPECIFI	VARIOLA VIRUS	199-427							
PRPOI_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR)	1005-1033							
PRPOJ_CAPVK	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	CAPRIPOXVIRUS (STRAIN KS-1)	207-233	647-696						
PRPOJ_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	COWPOX VIRUS (CPV)	203-236	642-678						
PRPOJ_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	202-236	642-678						
PRPOJ_VARV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPEPTIDE	VARIOLA VIRUS	202-236	642-678						
PRPOJ_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEPTIDE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	31-64							
PRPOJ_VARV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPEPTIDE	VARIOLA VIRUS	31-64							
PRPOK_FOWPI	DNA-DIRECTED RNA POLYMERASE 18 KD POLYPEPTIDE	FOWLPOX VIRUS (STRAIN FP-1)	31-88							
PRPOA_LELV	RNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS (LV)	1233-1268	3133-3163	3436-3457					
PRPOL_EAV	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS (EAV)	1771-2017	3041-3072						
PRPP1_DIVYI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	96-125	199-224						
PRPP1_IAV1I	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	138-170							
PRPP1_INCJI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA C VIRUS (STRAIN C/JJ/50)	344-398							
PRPP1_IAANN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	398-433	484-518						
PRPP2_IADH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/63)	484-518							
PRPP2_IAFPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	484-518							
PRPP2_IAG1B	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	484-518							
PRPP2_IAH1D	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	484-518							
PRPP2_IAHTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	484-518							
PRPP2_IAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/KOREA/426/68)	484-518							
PRPP2_IALE1	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	484-518							
PRPP2_IALE2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/17/57)	484-518							
PRPP2_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	484-518							
PRPP2_IAMT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/MT/6/68)	484-518							
PRPP2_IAPI0	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	484-518							
PRPP2_IAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	484-518							
PRPP2_IARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	484-518							
PRPP2_IASIN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SINGAPORE/1/57)	484-518							
PRPP2_IATUR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	484-518							
PRPP2_IAV1T	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	484-518							
PRPP2_IAWIL	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	484-518							
PRPP2_IAZH2	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/1/76)	484-518							
PRPP2_IAZH3	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/HONG KONG/12/81)	484-518							
PRPP2_IAZ11	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/OWA/1/30)	484-518							
PRPP2_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P2	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/1/77)	484-518							
PRPP3_IAEQD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/EQUI/PRAGUE/56)	515-553	581-613						
PRPP3_IAFPA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	581-613							
PRPP3_IAFPW	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/WEYBRIDGE)	579-613							
PRPP3_IAGUR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/MARYLAND/704/77)	581-613							
PRPP3_IAGUA	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	INFLUENZA A VIRUS (STRAIN A/GULL/SASKATCHEWAN/2/77/84)	581-613							

BAD ORIGINAL

PCGENE	PJUCTLJP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PRRPJ_IAJPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN AEQUINE/PRAGUE/1/56)	585-613						
PRRPJ_IAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	585-613						
PRRPJ_IAJUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/47/85)	585-613						
PRRPJ_IASEJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	585-613						
PRRPJ_IATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/833/80)	585-613						
PRRPJ_IAZII	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	585-613						
PRRPJ_IAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA A VIRUS (STRAIN A/SWINE/TENNESSEE/24/77)	585-613						
PRRPJ_INBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [COLD-ADAPTED])	735-769						
PRRPJ_INBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 [WILD-TYPE])	735-769						
PRRPJ_INCDE	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	609-641						
PRRPJ_INCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	INFLUENZA C VIRUS (STRAIN C/JJ/50)	608-641						
PRRPJ_THOGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT PJ	THOGOTO VIRUS (THO)	109-145	324-356					
PRRPA_CVHJJ	RNA-DIRECTED RNA POLYMERASE	HUMAN CORONAVIRUS (STRAIN 229E)	410-443	712-745	1382-1395	1963-1999	2078-2112	2474-2508	3133-3191
PRRPA_CVMHI	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	768-760	1344-1377	1757-1785	1933-1961			
PRRPB_DEV	RNA-DIRECTED RNA POLYMERASE	DERNE VIRUS (DEV)	941-969	2117-2169	2178-2206				
PRRPB_CVMA5	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN A59)	346-380	682-714	1686-1713	2696-2730			
PRRPB_CVMHJ	RNA-DIRECTED RNA POLYMERASE	MURINE CORONAVIRUS MHV (STRAIN JHM)	346-380	684-714	1687-1720	2156-2191	2696-2728		
PRRPB_CVPFS	RNA-DIRECTED RNA POLYMERASE	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	171-207	321-356	402-435				
PRRPB_CVPRI	RNA-DIRECTED RNA POLYMERASE	PORCINE RESPIRATORY CORONAVIRUS	80-113						
PRRPB_IBVB	RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	638-670						
PRRPL_BUNYW	RNA POLYMERASE	BUNYAMWERA VIRUS	301-331	1094-1128					
PRRPL_HANTV	RNA POLYMERASE	HANTAAN VIRUS (STRAIN 76-118) (KOREAN HEMORRHAGIC FEVER VIRUS)	1918-1971						
PRRPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	892-922	1181-1211					
PRRPL_MARBVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	144-178	698-736	1042-1074	1797-1832			
PRRPL_MARBVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	144-178	698-736	1042-1074	2221-2253			
PRRPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	191-223	647-681	788-823	1160-1192	1886-1914		
PRRPL_MUMVN	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	1882-1911						
PRRPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45) (NDV)	626-661	1331-1360					
PRRPL_P13HT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	268-305	536-595	654-688	1362-1399	1881-1912	2035-2053	
PRRPL_P13JH	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	41-76	735-764	784-814	2111-2139			
PRRPL_RAUVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	60-90	704-833	1365-1394	1910-1962			
PRRPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	60-90	704-833	1365-1394	1910-1962			
PRRPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS (RDV)	1293-1323						
PRRPL_RVFVZ	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	1018-1053	2009-2044					
PRRPL_SENDS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z/HOST MUTANT 5)	194-231	733-769	735-764	784-814	2140-2177		
PRRPL_SENDI	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN HOST MUTANT 15)	14-51	53-89	535-594	1917-1951	1960-1997		
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	194-231	733-769	735-764	784-814	2140-2177		
PRRPL_SEOUS	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	394-431	1918-1951	2011-2119				
PRRPL_SVSWR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR) (SV5)	537-594	1094-1123	2020-2051				
PRRPL_SYNV	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS (SYNV)	126-164	603-634	820-856	918-951	1484-1517		
PRRPL_TSWVD	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CNPH1/MR-01) (TSWV)	43-79	643-680	2286-2308	2169-2203	2481-2511	2865-2895	
PRRPL_TWIK	RNA POLYMERASE	UUKUNIEMI VIRUS (UUK)	1017-1051	1147-1177	1293-1321	2060-2093			
PRRPL_VSVIH	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS	109-144	713-749	1011-1039	1662-1697	1936-1969		
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS	1011-1039	1956-1989					
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	138-171	709-746	112-149	961-999	1011-1039	1739-1772	2011-2087
PRRPO_BWYVF	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1) (BWYV)	146-174						
PRRPO_BYDVP	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV) (BYDV)	722-755						
PRRPO_BYDVR	PROBABLE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV) (BYDV)	722-755						
PRRPO_CARNV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS (CARMV)	4-37						
PRRPO_CGMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	443-481	723-755	1095-1132	1565-1597			
PRRPO_CNV	PROBABLE RNA-DIRECTED RNA POLYMERASE	CUCUMBER NECROSIS VIRUS (CNV)	470-501						
PRRPO_CRN	PROBABLE RNA-DIRECTED RNA POLYMERASE	CYMBIDIUM RINGSPOT VIRUS	28-62	287-300	470-501				
PRRPO_IBDV1	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 52/70) (IBDV)	186-218	274-301					
PRRPO_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS	266-288	511-543	599-627				
PRRPO_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	760-790	749-778					
PRRPO_IPNVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP) (IPNV)	760-790	749-778					

BAD ORIGINAL

PGENE	PFAM ID	All Viruses (see bottom pages)							
PGENE	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PRRP_LYCVA	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	109-133	263-291	2037-2106				
PRRP_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	109-133						
PRRP_MOMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS (MCMV)	16-48	53-81					
PRRP_PLRVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN IL1) PLRV	376-407						
PRRP_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	376-407						
PRRP_PPMV3	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN) (PPMV)	375-407	702-730	859-891	1069-1106	1333-1365		
PRRP_RCNMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS (RCNMV)	278-314	326-353					
PRRP_REOVI	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DENDURE)	284-315						
PRRP_ROTBR	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	35-60	200-231	247-276				
PRRP_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	200-231	247-276					
PRRP_ROTPO	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	200-231	247-276					
PRRP_ROTSI	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	35-60	200-231	247-276				
PRRP_TACV	RNA POLYMERASE	TACAIBE VIRUS	17-32	109-138	2018-2112				
PRRP_TBSVC	PROBABLE RNA-DIRECTED RNA POLYMERASE	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY) (TBSV)	470-501						
PRRP_TCV	PROBABLE RNA-DIRECTED RNA POLYMERASE	TURNIP CRINKLE VIRUS (TCV)	280-318						
PRRP_TMGMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	67-97	128-159	209-244	376-406	450-481	835-887	1327-1359
PRRP_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE) (TMV)	200-231	247-276	700-728	1333-1365			
PRRP_TMVKR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN) (TMV)	128-159	376-406	700-728	1333-1365			
PRRP_TMVTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO) (TMV)	128-159	376-406	700-728	837-889	1333-1365		
PRRP_TNVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	231-261						
PRRP_TNVD	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	5-40	234-270					
PRRP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT) (CDV)	295-332						
PRRP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	295-332						
PRRP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3,CA)	295-332						
PRRP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	295-332						
PRRP_MUMPI	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	211-248						
PRRP_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	212-249						
PRRP_MUMPH	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN HIYAMIARA VACCINE)	212-249						
PRRP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32) (NDV)	220-255						
PRRP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/43) (NDV)	220-255						
PRRP_PIH	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (PIV-2	216-253						
PRRP_PIHIT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN TOSHIBA) (PIV-2)	216-253						
PRRP_PIHHA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	210-247	332-364					
PRRP_PIHIB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 61-333) (PIV-4B)	210-247	332-364					
PRRP_PIRYV	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	114-168						
PRRP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVO1)	216-244						
PRRP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	216-244						
PRRP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND RABIES VIRUS (STRAIN PM)	216-244						
PRRP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	88-122	216-244					
PRRP_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	216-244						
PRRP_SENDI	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN 2 / HOST MUTANTS)	510-566						
PRRP_SENDS	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN CVI-694)	510-566						
PRRP_SENHI	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN HARRIS)	510-566						
PRRP_SENOZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAI VIRUS (STRAIN Z)	510-566						
PRRP_SV5	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	199-236						
PRRP_VSVIN	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN MISSOURI)	198-230						
PRRP_VSVXO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN INDIANA)	197-230						
PSORF_VACCC	SUPPRESSOR OF DISRUPTION OF ASSEMBLY OF ACTIN CABLES LIKE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-51						
PSORF_VACCW	SUPPRESSOR OF DISRUPTION OF ASSEMBLY OF ACTIN CABLES LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	19-51						
PSORF_VARV	SUPPRESSOR OF DISRUPTION OF ASSEMBLY OF ACTIN CABLES LIKE PROTEIN	VARIOLA VIRUS	19-51						
PSOOC_VARV	SUPEROXIDE DISMUTASE LIKE PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	58-86	138-172	627-659	671-701			
PSPIB_AMEPV	SPHEROIDIN	NYXOMA VIRUS (STRAIN LAUSANNE)	167-200						
PSPIT_MYXVL	SERPIN 1	VACCINIA VIRUS (STRAIN COPENHAGEN)	112-140						
PSPI1_VACCC	SERINE PROTEINASE INHIBITOR 1	VACCINIA VIRUS (STRAIN WR)	112-140						
PSPI1_VACCV	SERINE PROTEINASE INHIBITOR 1	VARIOLA VIRUS	116-144						
PTACR_TOMPV	TRANSACTIVATOR PROTEIN	TOMATO PEST VIRUS	199-230						

BAD ORIGINAL

PCGENE	PIRCTL2P	AM Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILENAME	PROTEIN	VIRUS	99.139	172.210	461.491				
PIALA_HVDV	LARGE T ANTIGEN	HUNGARIAN FLEDGLING DISEASE VIRUS (HFDV)	99.139	172.210	461.491				
PIAMI_POVHA	MINOR T ANTIGEN	HAMSTER POLYOMAVIRUS	106.118						
PIAMI_POVMS	MINOR T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN 3)	43.80						
PIAMI_POVMA	MINOR T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	43.80						
PIAMI_POVMC	MINOR T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL PLAQUE)	43.80						
PIASM_POVBA	SMALL T ANTIGEN	POLYOMAVIRUS BK (STRAIN AS)	110.163						
PIASM_POVBK	SMALL T ANTIGEN	POLYOMAVIRUS BK	110.163						
PIASM_POVHA	SMALL T ANTIGEN	HAMSTER POLYOMAVIRUS	106.118						
PIASM_POVMA	SMALL T ANTIGEN	MOUSE POLYOMAVIRUS (STRAIN A2)	43.80						
PIASM_SV40	SMALL T ANTIGEN	SIMIAN VIRUS 40 (SV40)	133.164						
PIEGU_EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	143.173	1406.1503	1791.1819	3103.3117			
PIEGU_HCMVA	PROBABLE LARGE TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	161.192	699.736	812.840	2199.2228			
PIEGU_HSV6G	LARGE TEGUMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6/STRAIN GS)	122.159	346.401	615.641	1436.1469	2037.2072		
PIEGU_HSVEB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAR) (EHV-1)	265.397	359.580	1072.1106	1363.1392			
PIEGU_HVSA	PROBABLE LARGE TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	487.505	514.531	833.861	926.960	1403.1536	2431.2457	
PIERA_ADE07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	168.400						
PINAF_AVIS4	TRANSFORMING PROTEIN NAF	AVIAN MUSCULOPONEUROTIC FIBROSARCOMA VIRUS ASV2	130.263						
PIOP2_ASFB7	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	119.153	1105.1142					
PIOP2_ASFK1	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1) (ASFV)	114.151	1104.1141					
PIREL_AVIRE	REL TRANSFORMING PROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	180.128						
PIVSV_VZVD	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	131.156						
PIUL_HSV6U	PROTEIN UL	HERPES SIMPLEX VIRUS (TYPE 6/STRAIN UGANDA-1102)	131.201						
PIUP1_NPVAC	ECDYSTEROID UDP-GLUCOSYLTRANSFERASE PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (CNSHV)	185.219	197.425	412.484				
PIUL01_HCMVA	HYPOTHETICAL PROTEIN UL1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	133.59						
PIUL06_EBV	VIRION PROTEIN BNRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	155.186						
PIUL06_HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	404.416						
PIUL06_HSVEB	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAR) (EHV-1)	222.251	437.475					
PIUL06_HSVSA	VIRION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	299.330						
PIUL06_VZVD	VIRION GENE 56 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	223.252	502.530					
PIUL07_HCMVA	HYPOTHETICAL PROTEIN UL7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	186.216						
PIUL08_HSV11	GENE 55 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAR) (EHV-1)	Nov.39						
PIUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	05.96						
PIUL08_HSV11	PROTEIN UL8	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	614.648						
PIUL08_VZVD	GENE 52 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	227.255						
PIUL09_HSV11	ORIGIN OF REPLICATION BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	678.713						
PIUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	168.204						
PIUL10_PRVNI	UL10 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	40.76						
PIUL10_HSV11	PROTEIN UL10	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	23.52						
PIUL11_HSV6U	PROTEIN 10R	HERPES SIMPLEX VIRUS (TYPE 6/STRAIN UGANDA-1102)	202.319						
PIUL11_HSVEB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAR) (EHV-1)	294.338						
PIUL11_HSVSA	VIRION PROTEIN UL11	HERPESVIRUS SAIMIRI (STRAIN 11)	290.333						
PIUL11_PRVNI	PROTEIN UL11 HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	241.271						
PIUL11_VZVD	GENE 50 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	46.92	173.412					
PIUL12_HCMVA	HYPOTHETICAL PROTEIN UL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	13.87						
PIUL12_HSV11	PROTEIN UL12 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN TIOKNE VIII)	138.196						
PIUL13_HSVEB	VIRION PROTEIN UL13	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAR) (EHV-1)	143.179						
PIUL13_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	290.333						
PIUL13_VZVD	VIRION GENE 34 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	140.311						
PIUL14_HCMVA	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	287.316						
PIUL14_HSV11	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	464.501						
PIUL14_HSVSA	GENE 69 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	163.197						
PIUL15_EBV	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN BILF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	367.405						
PIUL15_HSV11	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN UL15	HERPES SIMPLEX VIRUS (TYPE 1/STRAIN 17)	404.418	564.592					
PIUL15_HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	81.115						
PIUL15_HSVSA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 68	HERPESVIRUS SAIMIRI (STRAIN 11)	276.307						
PIUL15_VZVD	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	151.381						
PIUL16_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	98.130						
PIUL35_HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	138.169						

BAD ORIGINAL

FIGURE	FUNCTION	All Viruses (no bacteriophages)								
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PU136 HCMVA	HYPOTHETICAL PROTEIN UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	186-223							
PU137 EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	85-113							
PU137 HSVEB	GENE 21 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)(EHV-1)	702-733	778-813						
PU137 HSVSA	GENE 61 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	366-403							
PU137 VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)(V2V)	398-439	706-736	776-806					
PU138 HCMVA	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137-188							
PU141 VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)(V2V)	274-307							
PU143 HSV11	MEMBRANE PROTEIN UL43	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	41-70							
PU145 HSV11	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)(V2V)	14-64	277-308						
PU147 HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	418-471	741-777						
PU147 HSVE4	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	580-615							
PU147 HSVEB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)(EHV-1)	587-622							
PU149 HSV11	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 1)	226-259							
PU149 HSVBP	TEGUMENT PROTEIN UL49 HOMOLOG	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	135-168							
PU151 EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	582-617							
PU152 HSV11	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	569-619	771-805						
PU152 HSVEB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)(EHV-1)	116-144	780-810	911-947					
PU153 HSVSA	PROBABLE DNA REPLICATION GENE 36 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	239-267	774-811						
PU155 HCMVA	PROTEIN UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	211-248							
PU156 HSV11	UL53 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN UGANDA-1102)	103-139							
PU160 HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-148							
PU170 HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	70-83	626-664						
PU177 HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	381-413	965-998						
PU178 HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	262-290	703-741						
PU179 HSVSA	HYPOTHETICAL GENE 10 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	138-165							
PU180 HSVSA	HYPOTHETICAL PROTEIN 3R	HERPESVIRUS SAIMIRI (TYPE 6 / STRAIN UGANDA-1103)	130-159							
PU188 HCMVA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	123-155							
PU188 HSVSA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	109-137							
PU189 HSVSA	HYPOTHETICAL PROTEIN 4R	HERPESVIRUS SAIMIRI (TYPE 6 / STRAIN UGANDA-1103)	156-187	738-772						
PU190 HSVSA	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	33-53							
PU191 EBV	HYPOTHETICAL PROTEIN IN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	106-144							
PU191 HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	123-153							
PU191 HCMVA	PROTEIN UL91	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	387-420							
PU195 EBV	HYPOTHETICAL PROTEIN BGLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	111-143							
PU198 HCMVA	HYPOTHETICAL PROTEIN UL198	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-130	733-781						
PU1F1 HCMVA	HYPOTHETICAL PROTEIN IN UL111	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	126-163							
PU1C8 HCMVA	HYPOTHETICAL PROTEIN IN UL128	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	64-96							
PU1C9 HCMVA	HYPOTHETICAL PROTEIN IN UL129	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	64-96							
PU1D7 HCMVA	HYPOTHETICAL PROTEIN IN UL139	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-114							
PUMG EBV	EMA(L-DNA GLYCOSYLASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)(HUMAN HERPESVIRUS 4)	156-189							
PUMG VACCC	EMA(L-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	83-117							
PUMG VARV	EMA(L-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	82-117							
PUMG VARV	EMA(L-DNA GLYCOSYLASE	VARIOLA VIRUS	82-117							
PU502 HCMVA	HYPOTHETICAL PROTEIN HGLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-73							
PU507 HCMVA	HYPOTHETICAL PROTEIN HXLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	133-166							
PU509 HCMVA	HYPOTHETICAL PROTEIN HXLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	179-213							
PU510 HCMVA	HYPOTHETICAL PROTEIN HXLF8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137-170							
PU512 HCMVA	HYPOTHETICAL PROTEIN HVLF4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	39-67	115-147						
PU513 HCMVA	HYPOTHETICAL PROTEIN HVLF5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-43							
PU515 HCMVA	HYPOTHETICAL PROTEIN HVLF7	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	303-335							
PU516 HCMVA	HYPOTHETICAL PROTEIN HVLF8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	151-188	243-274						
PU518 HCMVA	MEMBRANE PROTEIN HVLF9	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	115-132							
PU522 HCMVA	EARLY ANTIGEN PROTEIN HVLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	176-199							
PU536 HCMVA	HYPOTHETICAL PROTEIN HRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	132-164							
PU537 HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	247-283							
PU539 HCMVA	HYPOTHETICAL PROTEIN HRL4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	244-276							
PU539 HCMVA	HYPOTHETICAL PROTEIN HRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	208-244							

BAD ORIGINAL

FIGURE	FUNCTION	AB Viroset (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FIGURE	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PV123_ALFVL	123 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN	263-292						
PV16K_TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	21-41						
PV1PO_NPVAC	HELICASE	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	113-342						
PV17K_BSMV	17 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-71						
PV1A_CMVRN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN RNY) (CMV)	674-704						
PV1PO_ASFB7	1A PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	100-135						
PV1A_BDMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	618-673						
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS (CCMV)	125-163	618-673	762-799				
PV1A_CMVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY) (CMV)	208-243	292-320					
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q) (CMV)	205-240						
PV1A_TAV	1A PROTEIN	TOMATO ASPERMY VIRUS (TAV)	297-335						
PV1BK_TRVTC	19 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	102-133						
PV1A_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	135-187						
PV1A_BNYV	1A PROTEIN	BROME MOSAIC VIRUS (BMV)	139-189						
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS (CCMV)	160-188						
PV1A_IRVB	1A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	5-42						
PV1A_IBVB1	1A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN B1648) (IBV)	5-42						
PV1A_IBVB2	1A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	5-42						
PV1A_IBVUS	1A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/61/1766) (IBV)	5-42						
PV1BK_ACLSV	30 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS (ACLSV)	76-106						
PV1BK_BWYVF	31 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE FL-1) (BWYV)	166-196						
PV1BK_BWYVG	31 KD PROTEIN	BEET WESTERN YELLOWS VIRUS (ISOLATE GAU) (BWYV)	166-196						
PV16K_PLRVI	16 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV)	160-192						
PV16K_PLRVW	16 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	160-192						
PV1BK_BSMV	18 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	330-351						
PV70K_PLRVI	69 / 70 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV)	220-257						
PV70K_PLRVW	69 / 70 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	220-257						
PV90K_ANVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	103-131						
PVA04_VACCC	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-251						
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	217-251						
PVA04_VARV	PROTEIN A4	VARIOLA VIRUS	207-241						
PVA11_VACCC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-132						
PVA11_VARV	PROTEIN A11	VARIOLA VIRUS	96-133						
PVA18_VACCC	36 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	190-411						
PVA18_VACCV	36 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	190-411						
PVA18_VARV	36 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	190-411						
PVA23_VACCC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-111	170-203					
PVA23_VARV	PROTEIN A23	VARIOLA VIRUS	81-111	170-203					
PVA31_VACCC	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-76						
PVA31_VACCV	PROTEIN A31	VACCINIA VIRUS (STRAIN WR)	42-76						
PVA31_VARV	PROTEIN A31	VARIOLA VIRUS	42-76						
PVA33_VACCV	PROTEIN A33	VACCINIA VIRUS (STRAIN WR) AND VACCINIA VIRUS (STRAIN CONNAUGHT)	48-79						
PVA33_VARV	PROTEIN A33	VARIOLA VIRUS	48-80						
PVA40_VACCC	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-37						
PVA43_VACCC	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	94-129						
PVA43_VACCV	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	94-129						
PVA43_VARV	PROTEIN A43	VARIOLA VIRUS	95-130						
PVA57_VACCC	PROTEIN A57	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-141						
PVA57_VARV	PROTEIN A57	VACCINIA VIRUS (STRAIN WR)	109-141						
PVALI_BCTV	ALI PROTEIN	BEET CURLY TOP VIRUS (BCTV)	89-118						
PVALI_BGMV	ALI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	89-118						
PVALI_CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 84)	88-117						
PVALI_CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	88-117						
PVALI_PYMVV	ALI PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	89-118						
PVALI_TGMV	ALI PROTEIN	TOMATO GOLDEN MOSAIC VIRUS (TGMV)	89-118						
PVALI_TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (TYLCV)	89-118						

BAD ORIGINAL

PCGENE	FUNCTION	All Viruses (no bacteriophage)	ARRAY	ARRAY	ARRAY	ARRAY	ARRAY	ARRAY	ARRAY
FILE NAME	PROTEIN	VIRUS	ARRAY	ARRAY	ARRAY	ARRAY	ARRAY	ARRAY	ARRAY
PVAL1_BCTV	AL1 PROTEIN	BEET CURLY TOP VIRUS (BCTV)	82-115						
PVAL1_CLVK	AL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	77-113						
PVAL1_CLVN	AL1 PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-113						
PVAL1_TYLCM	AL1 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE) (TYLCV)	78-116						
PVAL1_TYLCV	AL1 PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (TYLCV	77-113						
PVAT_CAMVC	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841) (CAMV)	26-53	81-116					
PVAT_CAMVD	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H) (CAMV	26-53	102-130					
PVAT_CAMVE	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D8C) (CAMV)	26-53	81-116					
PVAT_CAMVN	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY1153) (CAMV)	26-53	81-116					
PVAT_CAMVP	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147) (CAMV)	26-53	81-116					
PVAT_CAMVS	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG) (CAMV)	26-53	81-116					
PVB04_VACCC	PROTEIN B4	VACCINIA VIRUS (STRAIN COPENHAGEN)	124-156	489-525					
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	124-156	489-525					
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	489-525						
PVB16_COWPX	INTERLEUKIN-1 BINDING PROTEIN PRECURSOR	COWPOX VIRUS (CPV)	89-126						
PVB16_VACCV	INTERLEUKIN-1 BINDING PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	89-126						
PVB19_VACCC	SURFACE ANTIGEN 3 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	211-244						
PVB19_VACCD	SURFACE ANTIGEN 3 PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	211-242						
PVB19_VACCV	SURFACE ANTIGEN 3 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	211-242						
PVB19_VARV	SURFACE ANTIGEN 3 PRECURSOR	VARIOLA VIRUS	211-242						
PVBR1_BGMV	BR1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	166-198						
PVC03_SFVKA	C-PROTEIN COUPLED RECEPTOR HOMOLOG C3	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	98-130						
PVC04_VACCC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-139	182-216					
PVC04_VACCD	PROTEIN C4	VACCINIA VIRUS (STRAIN DAIREN I)	109-139	183-215					
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	109-139						
PVC04_VARV	PROTEIN C4	VARIOLA VIRUS	109-139						
PVC06_VACCC	PROTEIN C6	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-67						
PVC06_VACCV	PROTEIN C6	VACCINIA VIRUS (STRAIN WR)	26-67						
PVC06_VARV	PROTEIN C6	VARIOLA VIRUS	26-67						
PVC07_SFVKA	HYPOTHETICAL PROTEIN C7	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	60-97						
PVC08_VACCC	PROTEIN C8	VACCINIA VIRUS (STRAIN COPENHAGEN)	377-410						
PVC08_VACCV	PROTEIN C8	VACCINIA VIRUS (STRAIN WR)	377-410						
PVC10_SFVKA	HYPOTHETICAL PROTEIN C10	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	85-121						
PVC10_VACCC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-158						
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	121-158						
PVC10_VARV	PROTEIN C10	VARIOLA VIRUS	121-158						
PVC11_VACCC	PROTEIN C11/B17	VACCINIA VIRUS (STRAIN COPENHAGEN)	2-34						
PVCAP_EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	140-183	208-310					
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-78	128-161	238-286				
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	19-49						
PVCAP_HSV2U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN UGANDA-1102)	124-161	664-696	841-869				
PVCAP_HSVER	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	13-54	179-212	272-301				
PVCAP_HVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	144-179	196-228	734-769	1061-1096			
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	PSEUDORABIES VIRUS (STRAIN INDIANA S) (PRV)	189-221	260-289					
PVCAP_VZVD	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	31-68						
PVCON_AIH3J	MINOR CORE PROTEIN	HUMAN AIR-3 ADENOVIRUS 3 TYPE 2	86-115						
PVCON_ADE05	MINOR CORE PROTEIN	HUMAN ADENOVIRUS 5 TYPE 5	85-114						
PVD01_VACCC	PROTEIN D1	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-50	146-182					
PVD01_VACCV	PROTEIN D1	VACCINIA VIRUS (STRAIN WR)	12-50	146-182					
PVD01_VARV	PROTEIN D1	VARIOLA VIRUS	12-50	146-182					
PVD03_VARV	92 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	315-352						
PVD03_VACCC	PROTEIN D3	VACCINIA VIRUS (STRAIN COPENHAGEN)	330-368						
PVD03_VACCV	PROTEIN D3	VACCINIA VIRUS (STRAIN WR)	330-368						
PVD03_VARV	PROTEIN D3	VARIOLA VIRUS	330-368						
PVD10_FOWPI	PROTEIN D10	FOWLPOX VIRUS (STRAIN FP-1)	114-143						
PVI01_VACCD	PROTEIN E5	VACCINIA VIRUS (STRAIN DAIREN I)	31-60						
PVI16_VACCC	PROTEIN I6	VACCINIA VIRUS (STRAIN COPENHAGEN)	236-260	430-458	511-540				
PVI16_VACCV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	236-260	430-458	511-540				

BAD ORIGINAL

PUGENE	PROTEIN	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
ELECASE	PROTEIN	VIRUS	410-458	111-540					
PVE06_VARV	PROTEIN E6	VARIOLA VIRUS	1-41						
PVE10_VACCC	PROTEIN E10	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-41						
PVE10_VACCV	PROTEIN E10	VACCINIA VIRUS (STRAIN WR)	1-41						
PVE10_VARV	PROTEIN E10	VARIOLA VIRUS	1-41						
PVE2_HPV16	PROBABLE E2 PROTEIN?	HUMAN PAPILLOMAVIRUS TYPE 16	102-131						
PVE2_NPVAC	EARLY 18.5 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNNPV)	65-77						
PVE2_HPV05	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	4-35						
PVE2_HPV11	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	230-291						
PVE2_HPV31	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	235-288						
PVE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	230-287	519-547					
PVE2_HPV35	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	230-283						
PVE2_HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	242-271						
PVE2_HPV45	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	105-138	193-231					
PVE2_HPV58	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	230-263						
PVE2_HPV6B	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	6-35						
PVE2_PAPVD	E2 PROTEIN	HUMAN PAPILLOMAVIRUS	230-291						
PVE2_PCFVI	E2 PROTEIN	DEER PAPILLOMAVIRUS	163-201						
PVE2_SPVAC	E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	233-290						
PVE2_HPV37	EARLY 23.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNNPV)	118-150						
PVE2_RHPV1	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 37	131-182						
PVE4_NPVAC	E2 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1 (RHPV 1)	111-147						
PVE5_HPV11	EARLY 40.9 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNNPV)	14-52						
PVE5A_HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	19-56						
PVE5A_HPV16	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6B	19-56						
PVE5A_HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	19-56						
PVE5_HPV33	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	19-56						
PVE5_HPV58	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	89-118						
PVE5_PCFVI	PROBABLE E5 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	21-58						
PVE5_RHPV1	PROBABLE E5 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1 (RHPV 1)	109-140						
PVE6_HPV16	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	91-128						
PVE6_HPV18	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1	55-90						
PVE6_HPV6B	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6	55-90						
PVE7_HPV11	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	47-83						
PVE7_HPV16	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	13-41						
PVE7_HPV18	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	19-77						
PVE7_HPV31	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	47-83						
PVE7_HPV33	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	47-84						
PVE7_HPV35	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	63-94						
PVE7_HPV45	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	55-90						
PVE7_HPV51	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	61-94						
PVE7_HPV56	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 56	48-84						
PVE7_HPV58	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	55-90						
PVE7_PAPVD	E7 PROTEIN	DEER PAPILLOMAVIRUS	48-86						
PVE7_PAPVE	E7 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS (EEPV)	60-93						
PVEM_NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNNPV)	121-157	650-678					
PVEF_GVIN	VIRAL ENHANCING FACTOR	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	134-182						
PVENV_DEV	ENVELOPE PROTEIN	DERNE VIRUS (DEV)	16-51	87-117					
PVENV_DIIII	ENVELOPE GLYCOPROTEIN PRECURSOR	DIORU VIRUS (STRAIN INDIANA) (1961) (DIHO)	297-335						
PVENV_MCVI	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCVI)	203-236						
PVENV_MCV2	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCVII)	203-236						
PVENV_VACC	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	208-241						
PVENV_VACCI	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN IHD-J)	208-241						
PVENV_VACCP	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN L-IVP)	208-241						
PVENV_VACCV	MAJOR ENVELOPE PROTEIN	VACCINIA VIRUS (STRAIN WR)	208-241						
PVENV_VARV	MAJOR ENVELOPE PROTEIN	VARIOLA VIRUS	155-187	208-241					

BAD ORIGINAL

PEGENE	PJUCTLZIP	All Viruses (no Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILE_NAME	PROTEIN	VIRUS							
PVT01_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	2-40	61-93					
PVT01_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	2-40	61-93					
PVFP1_FOWPV	PROTEIN FP1	FOWLPOX VIRUS	297-330						
PVFP4_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	237-267						
PVFP7_CAPVK	PROTEIN F7	CAPRIPOXVIRUS (STRAIN KS-1)	89-118						
PVFUS_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-61						
PVFUS_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	28-61						
PVFUS_VARV	14 KD FUSION PROTEIN	VARIOLA VIRUS	28-61						
PVG01_HSVII	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	317-346						
PVG02_HSVEB	HYPOTHETICAL GENE 2 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	163-196						
PVG02_VACCV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTE	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	92-120						
PVG02_VARV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTE	VARIOLA VIRUS	92-120						
PVG03_HSVII	HYPOTHETICAL GENE 3 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	108-136						
PVG04_HSVII	HYPOTHETICAL GENE 4 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	54-81						
PVG06_VACCC	PROTEIN G6	VACCINIA VIRUS (STRAIN COPENHAGEN)	99-116						
PVG06_VARV	PROTEIN G6	VARIOLA VIRUS	99-116						
PVG07_VACCC	PROTEIN G7	VACCINIA VIRUS (STRAIN COPENHAGEN)	113-145						
PVG07_VARV	PROTEIN G7	VARIOLA VIRUS	113-145						
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	303-338						
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	266-301						
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	303-338						
PVG11_HSVII	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	150-183						
PVG12_HSVII	HYPOTHETICAL GENE 12 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	206-243						
PVG12_HSVSA	HYPOTHETICAL GENE 12 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-106						
PVG1_SPVIR	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-RIA2 B	234-262	303-337	414-432				
PVG22_HSVII	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	300-337	647-678					
PVG23_HSVII	HYPOTHETICAL GENE 23 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	70-108						
PVG26_HSVII	HYPOTHETICAL GENE 26 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	94-125						
PVG37_HSVSA	HYPOTHETICAL GENE 37 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	36-74						
PVG38_HSVII	HYPOTHETICAL GENE 38 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	491-521						
PVGIR_AMEPV	HYPOTHETICAL GIR PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS (AMEPV)	180-213						
PVG1_SPV4	GENE 1 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	209-244						
PVG35_HSVII	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	13-46	190-226					
PVG36_HSVSA	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	151-185						
PVG39_HSVII	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	540-577	648-682					
PVG40_HSVSA	HYPOTHETICAL GENE 40 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-216						
PVG41_HSVII	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	11-45	202-233					
PVG42_HSVII	HYPOTHETICAL GENE 42 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	91-125						
PVG43_HSVII	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	109-140	137-185					
PVG46_HSVSA	PROBABLE MAJOR GLYCOPROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	888-923						
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	329-357						
PVG50_HSVSA	PROBABLE TRANSCRIPTION ACTIVATOR EDRF1	HERPESVIRUS SAIMIRI (STRAIN 11)	113-141						
PVG51_HSVII	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	29-64	84-130					
PVG52_HSVII	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	96-124						
PVG53_HSVII	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	108-139						
PVG56_HSVII	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	364-396	631-667	1091-1126				
PVG58_HSVII	HYPOTHETICAL GENE 58 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	342-375	486-508					
PVG58_HSVSA	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	23-60	193-233					
PVG59_HSVII	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	82-118						
PVG61_HSVII	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	74-109						
PVG64_HSVII	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	55-89	263-301	426-458				
PVG65_HSVII	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	801-836	1146-1174	1290-1326				
PVG67_HSV1	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	1150-1185						
PVG6_SPV1R	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPV1-RIA2 B	60-89						
PVG71_HSVSA	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	128-158						
PVG72_HSVII	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	445-478	728-751	1134-1189	1333-1383			
PVG75_HSVII	HYPOTHETICAL GENE 75 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	263-291	387-422					

BAD ORIGINAL

PUGLSE	PUGLTZIP	All Viruses (no bacteriophages)						
ENTRY_NAME	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVGP6_IISV11	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	187-221					
PVGF1_SPVIR	GENE 7 PROTEIN	SPIROPLASMA VIRUS SPV1-ARIA2 B	18-46					
PVGF1_IBVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	1119-1167	1136-1891	2103-2146	3601-3633		
PVGH1_HCMVA	GLYCOPROTEIN H1101 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	80-115	137-183				
PVGL2_CVBF	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	1239-1294					
PVGL2_CVBL9	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	651-681					
PVGL2_CVBLY	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	1239-1294					
PVGL2_CVBN1	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEBUS)	1239-1294					
PVGL2_CVBQ	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	1239-1294					
PVGL2_CVBV	E3 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	1239-1294					
PVGL2_CVH12	E3 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	1033-1088					
PVGL2_CVM4	E3 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4) (MHV-4)	1287-1304					
PVGL2_CVMA5	E3 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59	1215-1232					
PVGL2_CVMJC	E3 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHMV / VARIANT CL-2)	1267-1304					
PVGL2_CVMJH	E3 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	1126-1163					
PVGL2_CVP75	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	612-663	736-764	1328-1363			
PVGL2_CVPAU	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	612-663	736-764	1328-1363			
PVGL2_CVPPR	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	630-663	734-762	1326-1361			
PVGL2_CVPTU	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS	630-663	734-762	1326-1361			
PVGL2_CVPUR	E3 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS	512-560	1104-1139				
PVGL2_CVPRM	E3 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4) (PRCV)	408-441	512-560	1104-1139			
PVGL2_CVPRT	E3 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NEB	630-663	734-762	1326-1361			
PVGL2_FIPV	E3 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146) (FIPV)	633-666	739-767	1331-1366			
PVGL2_IBVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	133-188					
PVGL8_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-147	706-743				
PVGL8_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	116-147	707-744				
PVGL8_IISV6U	GLYCOPROTEIN B	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	72-110					
PVGLD_IISV01	GLYCOPROTEIN D PRECURSOR	BOVINE HERPESVIRUS TYPE 1	214-288					
PVGLD_IISVBJ	GLYCOPROTEIN D PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BAKU) (BOVINE MAMMILLITIS VIRUS	743-774					
PVGLB_IISVMC	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER	233-287					
PVGLH_ILTVA	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN A25) (ILTV)	442-472					
PVGLH_ILTVS	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2) (ILTV)	453-482					
PVGLH_ILTVT	GLYCOPROTEIN H PRECURSOR	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882) (ILTV)	453-482					
PVGLH_MCMVS	GLYCOPROTEIN H PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-163	738-776				
PVGLC_IISV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	467-500					
PVGLC_IISVIK	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	467-500					
PVGLC_IISV1	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	435-465					
PVGLC_IISV33	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	434-466					
PVGLC_IISVMC	GLYCOPROTEIN G(II) PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	435-907					
PVGLC_VZVD	GLYCOPROTEIN C(V)	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	351-388	515-548				
PVGLC_VZVS	GLYCOPROTEIN C(V)	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT) (VZV)	351-388	515-548				
PVGLD_IISVEA	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1) (EHV-1)	360-370					
PVGLD_IISVII	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1	41-76	390-420				
PVGLD_IISVEK	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1	41-76	390-420				
PVGLE_IISVE4	GLYCOPROTEIN E	EQUINE HERPESVIRUS TYPE 4	93-125					
PVGLE_IISVEN	GLYCOPROTEIN E PRECURSOR	EQUINE HERPESVIRUS TYPE 1	63-100	390-420				
PVGLE_IISVEL	GLYCOPROTEIN E PRECURSOR	EQUINE HERPESVIRUS TYPE 1	63-100	393-423				
PVGLE_PRVRI	GLYCOPROTEIN GI PRECURSOR	PSEUDORABIES VIRUS (STRAIN BECKER) (PRV)	112-169					
PVGLF_IIHSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	265-301	432-511				
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN) (GIII-5)	484-513					
PVGLF_BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94) (BRS)	484-513					
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEPOORT) (CDV)	503-536					
PVGLF_IIHSVI	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	484-513					
PVGLF_IIHSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	484-513					
PVGLF_IIHSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	484-513					
PVGLF_IIHSVR	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSS-2)	484-513					
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON)	224-256	431-484				

BAD ORIGINAL

PEGENE	PEPTIDE	AB Viruses (no Betrolepapet)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
		VIRUS	227-259	434-487					
PVGLF_MEASI	PROTEIN	MEASLES VIRUS (STRAIN IP-1-CA	224-256	431-484					
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	5-38	448-474					
PVGLF_MUMPI	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	446-474						
PVGLF_MUMPM	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	446-474						
PVGLF_MUMPR	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	5-38	446-474					
PVGLF_MUMPS	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	132-165						
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN45) (NDV)	132-163	447-480					
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LA5/46) (NDV)	531-565						
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	436-484						
PVGLF_PIIIC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C35)	435-481						
PVGLF_PIIB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	435-481						
PVGLF_PIIH4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885	226-253	447-480					
PVGLF_RINDK	FUSION GLYCOPROTEIN PRECURSOR (	RINDERPEST VIRUS (STRAIN KABETE O) (RDV)	226-253	447-480					
PVGLF_RINDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L) (RDV)	460-488						
PVGLF_SEND1	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	460-488						
PVGLF_SENDF	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	460-488						
PVGLF_SENDH	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	460-488						
PVGLF_SENDI	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HVJ)	460-488						
PVGLF_SENDZ	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	460-488						
PVGLF_SV5	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	446-474						
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	432-481						
PVGLG_HSVEB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	337-364						
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR	SONCHUS YELLOW NET VIRUS (SYNV)	324-351						
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	450-488						
PVGLG_VSVIO	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	437-492						
PVGLG_VSVO	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (STRAIN ORSAY)	450-488						
PVGLG_VSVSJ	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	450-488						
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	691-719						
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	690-718						
PVGLH_HSVGG	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	215-247	640-677					
PVGLH_HSVE4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4	814-850						
PVGLH_HSVEB	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 1	807-843						
PVGLH_HCMVA	IMMEDIATE EARLY GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-194						
PVGLN_BUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	197-227	438-468	982-1030	1049-1084			
PVGLN_BUNGJ	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE 174)	190-220						
PVGLN_BUNSH	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE HARE	190-220	144-381					
PVGLN_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	193-228	434-492	823-854				
PVGLN_BUNYW	M POLYPROTEIN PRECURSOR	BUNYAMWERA VIRUS	244-311	637-672	876-915	915-965	1403-1441		
PVGLN_HANTH	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN H-1) (KOREAN HEMORRHAGIC FEVER VIRUS)	610-641	1081-1119					
PVGLN_HANTJ	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN HOJO)	188-222	612-643	1042-1120				
PVGLN_HANTL	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN LEP)	188-222	612-641	1083-1131				
PVGLN_HANTV	M POLYPROTEIN PRECURSOR	HANTAAN VIRUS (STRAIN 76-118)	188-222	612-643	1063-1111				
PVGLN_INSV	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS (INSV)	269-307	1028-1062					
PVGLN_PHV	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS (PHV)	616-649	1088-1121					
PVGLN_PTV	M POLYPROTEIN PRECURSOR	PUNTA TORO PHLEBOVIRUS	648-682	1275-1309					
PVGLN_PUUMH	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN HALLNAS III)	620-653	1092-1125					
PVGLN_PUUMS	M POLYPROTEIN PRECURSOR	PUUMALA VIRUS (STRAIN SOTKAMO)	620-653	1092-1125					
PVGLN_RVFV	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (RVFV)	620-650	870-883					
PVGLN_RVFV2	M POLYPROTEIN PRECURSOR	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	620-650	870-883	1136-1185				
PVGLN_SEOUB	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN 80-39)	616-641	1081-1119					
PVGLN_SEOUR	M POLYPROTEIN PRECURSOR	SEOUL VIRUS (STRAIN R22)	605-641	1082-1120					
PVGLN_SEPUS	M POLYPROTEIN PRECURSOR	SIN NOMBRE VIRUS (STRAIN SN-11) (SAPPORO RAT VIRUS)	616-641	1081-1119					
PVGLN_UUK	M POLYPROTEIN PRECURSOR	UUKUNIEMI VIRUS (UUK)	431-468	966-995					
PVGLP_DEV	PERIPLASMIC GLYCOPROTEIN PRECURSOR	RABIES VIRUS (DEV)	1491-1536						
PVGLY_JUNIN	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	12-43						
PVGLY_LASSG	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	233-265						
PVGLY_LASSI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN RISSAI)	238-266						

BAD ORIGINAL

FEGENE	FUNCTION	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILE NAME	PROTEIN	VIRUS	12-50						
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	12-50						
PVGLY_TACVJ	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	12-50	89-124					
PVGLY_TACVS	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARINE VIRUS (STRAIN V)	12-50	89-124					
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARINE VIRUS (STRAIN VI)	12-50	89-124					
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	12-50	1323-1355					
PVGNB_CPMV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS (CPMV)	206-242	741-771					
PVGNM_CPMV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS (CPMV)	90-86	479-515					
PVGNM1_CPSMV	GENOME POLYPROTEIN M1	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	766-799						
PVGNM1_RCMV	GENOME POLYPROTEIN M1	RED CLOVER MOTTLE VIRUS (RCMV)	78-111						
PVGP2_EBV	PROBABLE MEMBRANE ANTIGEN GP220	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	78-111						
PVGP3_EBV	ENVELOPE GLYCOPROTEIN GP140	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	78-111						
PVI01_VACCC	LATE PROTEIN H3	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-89						
PVH01_VACCV	LATE PROTEIN H3	VACCINIA VIRUS (STRAIN WR)	54-89						
PVI03_VARV	LATE PROTEIN H3	VARIOLA VIRUS							
PVI03_VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	113-149						
PVI05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	113-149						
PVI03_VARV	PROTEIN H5	VARIOLA VIRUS	133-167						
PVHEL_LSV	PROBABLE HELICASE	LUCKSYSIPTOMLESS VIRUS (LSV)	167-143						
PVI01_VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-82						
PVH01_VARV	PROTEIN I1	VARIOLA VIRUS	54-82						
PVI06_VACCC	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	55-88						
PVI06_VARV	PROTEIN I6	VARIOLA VIRUS	55-88						
PVI08_VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	391-424						
PVI08_VACCV	PUTATIVE RNA III LICASE I8	VACCINIA VIRUS (STRAIN WR)	391-424						
PVI08_VARV	PUTATIVE RNA III LICASE I8	VARIOLA VIRUS	391-424						
PVIE1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN I	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	243-271						
PVIE1_HCMVI	55 KD IMMEDIATE-EARLY PROTEIN I	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	243-271						
PVIF_BIV06	VIRION INFECTIVITY FACTOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 006) (BIV)	42-78						
PVIF_BIV23	VIRION INFECTIVITY FACTOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	42-78						
PVIF_SIVCPZ	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE CPZ)	46-78						
PVIF_SIVMM	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (RAW ISOLATE) (SIVMAC)	82-111						
PVIP_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN (UL7)	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	125-159						
PVIP_HCMVA	PROBABLE INTEGRAL MEMBRANE PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	68-100						
PVIP_HSV11	PROBABLE INTEGRAL MEMBRANE PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-114	136-171	230-263				
PVIP_HSV1B	PROBABLE INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	24-56	93-127	145-180	332-361			
PVIP_HSV1S	INTEGRAL MEMBRANE PROTEIN	HERPES VIRUS SAIMIRI (STRAIN 11)	76-111						
PVIN1_SSV1	PRIMARY ENVELOPMENT PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	253-291						
PVI05_VACCC	PROBABLE INTEGRASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	54-85						
PVI05_VACCV	PROTEIN J5	VACCINIA VIRUS (STRAIN WR)	54-85						
PVI05_VARV	PROTEIN J5	VARIOLA VIRUS	54-85						
PVK04_VACCC	PROTEIN K4	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-120						
PVK04_VACCV	PROTEIN K4	VACCINIA VIRUS (STRAIN WR)	87-120						
PVK05_VACCC	PROTEIN K5	VACCINIA VIRUS (STRAIN COPENHAGEN)	74-103						
PVK05_VACCV	PROTEIN K5	VACCINIA VIRUS (STRAIN WR)	87-116						
PVL01_VACCC	PROTEIN L2	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-76						
PVL01_VACCV	PROTEIN L2	VACCINIA VIRUS (STRAIN WR)	39-76						
PVL01_VARV	PROTEIN L2	VARIOLA VIRUS	39-76						
PVL03_VACCC	PROTEIN L3	VACCINIA VIRUS (STRAIN COPENHAGEN)	292-322						
PVL03_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR)	292-322						
PVL03_VARV	PROTEIN L3	VARIOLA VIRUS	291-321						
PVL03_VACCV	PROTEIN L3	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGEN)	16-45						
PVL05_VARV	PROTEIN L5	VARIOLA VIRUS	16-45						
PVL1_HPV16	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	333-406						
PVL1_CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS) (CRPV)	36-57						
PVL1_HPV05	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	33-53						
PVL1_HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	33-53						
PVL1_HPV1A	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	36-56						

BAD ORIGINAL

PUGENE	PUCTIZIP	All Viruses (no bacteriophage)							
ENTRY	PROTEIN	VIRUS	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1	AREA1
PVL2_HPV39	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	29-59	185-311					
PVL2_HPV45	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 45	344-379						
PVL2_HPV47	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	26-51						
PVL2_HPV51	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	29-59						
PVL2_HPV56	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 56	27-57						
PVL2_HPV68	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	29-59						
PVL2_PCPV1	PROBABLE L1 PROTEIN	PYGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	29-59						
PVL2% IRVI	L2% PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS TYPE 1)	144-177	686-718					
PVMII_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING	280-318	324-361					
PVMII_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	280-318						
PVMIII_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199						
PVMIII_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199						
PVMIII_REOVJ	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 2 / STRAIN D/JONES)	168-199						
PVMIII_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/MU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-199						
PVMIII_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	333-364						
PVMAT_SV5	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	308-342						
PVMAT_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	122-150						
PVSME1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	64-102						
PVSME1_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	64-102						
PVSME1_CVMAS	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	65-103						
PVSME1_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	65-103						
PVSME1_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS (TCV)	64-102						
PVSME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	73-101						
PVSME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE A142) (IBV)	73-101						
PVSMEN_ERV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	178-213						
PVSNP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS (CERV)	93-126						
PVSNP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	66-98	333-363					
PVSSA_IIPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE 55) (DHBV)	201-238	269-302					
PVSSA_IIPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA) (DHBV)	194-227	268-301					
PVSSA_IIPBDJ	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (DHBV)	137-190	331-364					
PVSSA_IIPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE 55) (DHBV)	194-228	268-302					
PVSSA_IIPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS (GSHV)	209-243	277-307					
PVSSA_IIPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	159-193	236-269					
PVSSA_IIPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	70-98						
PVSSA_IDBV1	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	244-272						
PVSSA_IDBV4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	244-272						
PVSSA_IDBV9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS D VIRUS (SUBTYPE ADW / STRAIN 991)	244-272						
PVSSA_IDBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	333-361						
PVSSA_IDBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	70-98						
PVSSA_IDBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	333-361						
PVSSA_IDBVJ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	333-361						
PVSSA_IDBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH1 / CHIMPANZEE ISOLATE)	333-361						
PVSSA_IDBVN	MAJOR SURFACE ANTIGEN	HEPATITIS D VIRUS (SUBTYPE ADR / STRAIN NC1)	70-98						
PVSSA_IDBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	333-361						
PVSSA_IDBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PFDW284)	244-272						
PVSSA_IDBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	244-272						
PVSSA_IDBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	70-98						
PVSSA_IIPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	333-361						
PVSSA_IIPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	333-361						
PVSSA_IIPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADYW)	333-361						
PVSSA_WHV1	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	207-241	268-305					
PVSSA_WHV19	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 19	213-246	274-310					
PVSSA_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	213-246	274-310					
PVSSA_WHV8	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8	213-246	274-310					
PVSSA_WHV11	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	213-246	274-305					
PVSSA_WHV6	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PW123)	128-161						
PVMAT_IAZII	MATRIX (M1) PROTEIN	INFLUENZA A VIRUS (STRAIN A/WSN/33/VIRUS)	60-92						

BAD ORIGINAL

PCGENE	PIRCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVMT8_MYXVL	M-T8 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	5-34	141-170					
PVMT9_MYXVL	M-T9 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	246-282						
PVN02_VACCC	PROTEIN N2	VACCINIA VIRUS (STRAIN COPENHAGEN	31-68						
PVN02_VACCV	PROTEIN N2	VACCINIA VIRUS (STRAIN WR)	31-68						
PVN02_VARV	PROTEIN N2	VARIOLA VIRUS	31-68						
PVN34_ROTPC	NONSTRUCTURAL PROTEIN NS34	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	336-366						
PVNCA_AAV2	DNA REPLICATION PROTEIN	ADENO-ASSOCIATED VIRUS 2 (AAV2)	163-196	365-401					
PVNCS_PAVHO	PROBABLE NONCAPSID PROTEIN NS1	BOVINE PARVOVIRUS (BPV)	180-217	346-379	439-471				
PVNS1_AHSV4	NONSTRUCTURAL PROTEIN NS1	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	351-380						
PVNS1_IAALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ALASKA/6/77)	114-144						
PVNS1_IAANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	114-144						
PVNS1_IACHI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	114-144						
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/N/49)	107-144						
PVNS1_IACKI	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/CHICKEN/JAPAN/24)	104-141						
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/60/76)	107-144						
PVNS1_IADE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/56)	104-141						
PVNS1_IADU3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/1/63)	104-141						
PVNS1_IAFON	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	114-144						
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	114-144						
PVNS1_IAFPR	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/34)	107-144						
PVNS1_IALE1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/134/57)	114-144						
PVNS1_IALEN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	114-144						
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/ALBERTA/88/76)	107-144						
PVNS1_IAMAN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	107-144						
PVNS1_IAMAO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6874/78)	107-144						
PVNS1_IAMYN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/MYNAH/MANEDA-THAI/76)	104-141						
PVNS1_IAPI0	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/119/79)	107-144						
PVNS1_IAPI1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/121/79)	107-144						
PVNS1_IAPI3	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/268/78)	107-144						
PVNS1_IAPI7	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PINTAIL/ALBERTA/358/79)	107-144						
PVNS1_IAPUE	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	114-144						
PVNS1_IATKB	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/BETHLEHEM-GLILIT/1492-B/82)	107-144						
PVNS1_IATKC	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TURKEY/CANADA/63)	107-144						
PVNS1_IATRS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/SOUTH AFRICA/61)	104-141						
PVNS1_IATRT	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/TERN/TURKMENIA/18/72)	107-144						
PVNS1_IAUDX	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/UDORN/307/72)	114-144						
PVNS1_IAUSS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/USSR/90/77)	114-144						
PVNS1_IAZII	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN A/SWINE/IOWA/15/30	107-144						
PVNS1_INBPA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA B VIRUS (STRAIN B/PA/79)	266-295						
PVNS1_INCAA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/ANN ARBOR/1/50)	222-255						
PVNS1_INCCA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	222-255						
PVNS2_HRSVI	NONSTRUCTURAL PROTEIN 2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	20-49						
PVNS2_HRSVA	NONSTRUCTURAL PROTEIN 2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	20-49						
PVNS2_INBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/LEE/40	48-77						
PVNS2_INBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN B/YAMAGATA/1/73)	48-77						
PVNS4_CVMS	NONSTRUCTURAL PROTEIN 4	MURINE CORONAVIRUS MHV (STRAIN S)	17-45						
PVNS4_CVPFS	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS77	4-34						
PVNS4_CVPPU	NONSTRUCTURAL PROTEIN 4	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR	4-39						
PVNS4_CVPRM	NONSTRUCTURAL PROTEIN 4	PORCINE RESPIRATORY CORONAVIRUS	4-39						
PVNST_CVMA5	30 KD NONSTRUCTURAL PROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	45-80						
PVNST_CVMJHM	30 KD NONSTRUCTURAL PROTEIN	MURINE CORONAVIRUS MHV (STRAIN JHM)	49-84						
PVNST_INCGL	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	222-255						
PVNST_INCJH	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	222-255						
PVNST_INCMI	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/MISSISSIPPI/80)	222-255						
PVNST_INCYA	NONSTRUCTURAL PROTEINS NS1-NS2	INFLUENZA C VIRUS (STRAIN C/YAMAGATA/10/81)	222-255						
PVNUA_PRVKA	PROBABLE NUCLEAR ANTIGEN	PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	356-384						
PVNUC_IHIVI	NUCLEOPROTEIN	INDIRI VIRUS (STRAIN INDIAN/1311/61) (INDI)	397-431	441-476					

BAD ORIGINAL

PCGENE	P2SCTLZIP	All Viruses (no bacteriophages)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVNUC_IAICP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	334-388						
PVNUC_IAJLO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1416/73)	334-388						
PVNUC_IAJPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	334-388						
PVNUC_IAJTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/86)	334-388						
PVNUC_MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOKE)	16-46						
PVNUC_MADVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	16-46						
PV001_VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN	511-539	550-581					
PV001_VARV	PROTEIN O1	VARIOLA VIRUS	511-539						
PVORI_NMV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS (NMV)	121-150	641-671					
PVORI_PVMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN) (PVM)	1667-1703						
PVORI_SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYEAV)	121-153						
PVP03_HSVSA	PROBABLE MEMBRANE ANTIGEN)	HERPESVIRUS SAIMIRI (STRAIN 11)	462-493						
PVP10_NPVAC	P10 PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	4-38						
PVP10_NPVOP	P10 PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	4-38						
PVP10_RBSDV	PROTEIN S10	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	260-291						
PVP19_HSVEB	CAPSID ASSEMBLY AND DNA MATURATION PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	239-268	287-325					
PVP23_HCMVA	PROBABLE CAPSID PROTEIN VP23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	141-172						
PVP23_HSV6U	PROBABLE CAPSID PROTEIN VP23	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	46-79	206-238					
PVP23_HSVEB	PROBABLE CAPSID PROTEIN VP23	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	10-48						
PVP23_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	224-253						
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	408-441						
PVP2_BTV10	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	649-683						
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	558-586	649-683					
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	391-424	564-591					
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	654-688						
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	654-688						
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	878-915						
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN NF)	334-367	522-557					
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	334-367	523-558					
PVP2_ROTHW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	342-377	532-567					
PVP2_ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	514-549	589-617	811-841				
PVP2_ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	335-368	523-558					
PVP35_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-311						
PVP35_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VACCINIA VIRUS (STRAIN WR)	278-311						
PVP35_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P35	VARIOLA VIRUS	279-312						
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPMNPV)	107-141						
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	383-412	734-770					
PVP3_EHDVA	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	383-412	734-770					
PVP3_RDV	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	297-330						
PVP3_ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	652-688						
PVP40_EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	429-457						
PVP40_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11	119-152						
PVP40_ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882) (ILTV)	84-119						
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV	485-516						
PVP47_NPVAC	VIRAL TRANSCRIPTION REGULATOR P47	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	239-270						
PVP4A_VACCC	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	553-591						
PVP4A_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)	553-591						
PVP4A_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS	554-592						
PVP4_ROTGI	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	93-122	468-499					
PVP4_WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WTV)	278-308	624-659					
PVP5_BRD	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)	96-133	295-326					
PVP5_BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	295-324						
PVP5_BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-324						
PVP5_BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	295-324						
PVP5_EHDV1	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV-1)	290-325						
PVP5_WTV	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS (WTV)	691-719						
PVP61_BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	159-187						

BAD ORIGINAL

PCGENE	PJUCT12IP	All Viruses (no bacteriophage)	AREA1	AREA1	AREA2	AREA2	AREA3	AREA3	AREA4	AREA4	AREA5	AREA5
CLILNAME	CBOTEIN	VIRUS	155-181	210-245								
PV761_BIVI0	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	35-61	333-357								
PV762_MRDV	PROBABLE NONSTRUCTURAL 76.) KD PROTEIN	MAIZE ROUGH DWARF VIRUS (MRDV)										
PV764_NPVOP	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPNPV)	285-313									
PV765_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	281-316									
PV766_NPVGN	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GMNPV)	190-233									
PV767_BIVI1	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	155-181									
PV768_BIVI7	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	155-181									
PV769_BIVI5	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE SOUTH AFRICA)	159-187									
PV770_BIVI5	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 21 / ISOLATE USA)	131-159									
PV771_BIV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	180-209									
PV772_WTV	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (WTV)	180-209									
PV773_WTVNJ	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	180-209									
PV774_NPVAC	39 KD PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	401-443									
PV775_WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS (WTV)	434-490									
PV776_NPVOP	CAPSID PROTEIN P87	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPNPV)	37-112									
PV777_BIVI0	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-139									
PV778_BIVI1	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-139									
PV779_BIVI1	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-139									
PV780_BIVI7	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-139									
PV781_BIVIA	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-139									
PV782_BIVI5	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE SOUTH AFRICA)	104-139									
PV783_BIV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	104-139									
PV784_RDV	OUTER CAPSID PROTEIN P8	RICE DWARF VIRUS (RDV)	174-412									
PV785_WTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS (WTV)	164-195	379-412								
PV786_NPVAC	39 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	143-173									
PV787_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (OPNPV)	123-151									
PVPR_HIV1A2	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE) (HIV-1)	37-74									
PVPR_HIV2BE	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ALI) (HIV-2)	41-73									
PVPR_HIV2CA	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2) (HIV-2)	41-73									
PVPR_HIV2D1	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194) (HIV-2)	41-73									
PVPR_HIV2D2	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7) (HIV-2)	41-73									
PVPR_HIV2NZ	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-Z) (HIV-2)	41-73									
PVPR_HIV2RO	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	41-73									
PVPR_HIV2SI	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL6669) (HIV-2)	41-73									
PVPR_HIV2ST	VPR PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST) (HIV-2)	46-78									
PVPR_SIVCZ	VPR PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	33-74									
PVPR_SIVAG	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (SIV(AGM3-ID) ISOLATE) (SIV-AGM)	37-69									
PVPR_SIVAI	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-AGM)	37-69									
PVPR_SIVAK	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K3B ISOLATE) (SIV-AGM)	37-69									
PVPR_SIVAM	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (B2/MANDRILL/ISOLATE) (SIV-MAN)	37-69									
PVPR_SIVSP	VPR PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PBJDC1 ISOLATE) (SOOTY MANGABE)	37-69									
PVPU_HIV1B1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE,HXB3 ISOLATE)	1-33									
PVPU_HIV1B8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (D1H8 ISOLATE) (HIV-1)	4-33									
PVPU_HIV1BN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE) (HIV-1)	1-14									
PVPU_HIV1H2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HIV-1)	1-33									
PVPU_HIV1U2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (U2 ISOLATE) (HIV-1)	1-34									
PVPU_HIV1R	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HIV23 ISOLATE) (HIV-1)	1-33									
PVPU_HIV1V	VPU PROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	116-154									
PVPU_JSRV	VPU PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS (LDV)	25-53									
PVPX_LDV	VPX PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	133-71									
PVPY_BIV1	ORF-Y PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	290-319	676-705								
PVRNA_BSMV	ALPHA-A PROTEIN	HUMAN ROTAVIRUS (STRAIN IGV 88-3)	198-230									
PVS05_ROTHU	NONSTRUCTURAL PROTEIN NCVP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	88-119	331-393								
PVS05_ROTPC	NONSTRUCTURAL PROTEIN NS53	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	315-347									
PVS05_ROTSI	NONSTRUCTURAL PROTEIN NCVP2	BOVINE ROTAVIRUS (STRAIN B1)	55-92									
PVS06_ROTBR	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	64-93	333-366								
PVS06_ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	55-93									
PVS06_ROTBU	VP6 PROTEIN											

BAD ORIGINAL

PCGENE	PIRCTLZIP	All Viruses (no bacteriophage)							
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVS06_ROTEF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	55-92						
PVS06_ROTEH	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	55-92						
PVS06_ROTH1	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	55-92						
PVS06_ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-92	312-340					
PVS06_ROTHS	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	55-92						
PVS06_ROTHW	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	55-92	313-349					
PVS06_ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN	64-92						
PVS06_ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	55-92	313-349					
PVS06_ROTSI	VP6 PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	55-92	313-349					
PVS08_ROTSI	NONSTRUCTURAL PROTEIN NCVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	274-302						
PVS09_ROTHT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	131-159						
PVS09_ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	131-159						
PVS10_ROTBN	NONSTRUCTURAL GLYCOPROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN NCDV)	52-89						
PVS10_ROTBU	NONSTRUCTURAL GLYCOPROTEIN NCVP3	BOVINE ROTAVIRUS (STRAIN UK)	52-89						
PVS10_ROTH2	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A28)	52-89						
PVS10_ROTH7	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	52-89						
PVS10_ROTH8	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6	52-89						
PVS10_ROTHW	NONSTRUCTURAL GLYCOPROTEIN NCVP3	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	52-89						
PVS10_ROTSI	NONSTRUCTURAL GLYCOPROTEIN NCVP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	52-89						
PVS11_ROTHW	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	99-130						
PVS11_REOVJ	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN DS/JONES)	346-384						
PVS11_REOVL	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	110-147						
PVT1_SFVKA	PROTEIN T1 PRECURSOR	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	147-182						
PVT2_MIYXVL	TUMOR NECROSIS FACTOR SOLUBLE RECEPTOR PRECUR	MYXOMA VIRUS (STRAIN LAUSANNE)	261-290						
PVT2_SFVKA	TUMOR NECROSIS FACTOR SOLUBLE RECEPTOR PRECUR	SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	211-249						
PVT3A_CAPVI	PROTEIN T3A	CAPRIPOXVIRUS (STRAIN INS-1)	116-150						
PVTER_EBV	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	166-199	505-543					
PVTER_HCMVA	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	176-209						
PVTER_HSV11	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	756-788						
PVX_SEND6	X PROTEIN	SENDAI VIRUS (STRAIN 6/94)	57-93						
PY104_ADE07	HYPOTHETICAL 10.4 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	55-83						
PY10K_MSVS	HYPOTHETICAL 10.9 KD PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE) (MSV)	24-54						
PY10K_WDV	HYPOTHETICAL 10 KD PROTEIN	WHEAT DWARF VIRUS (WDV)	22-59						
PY119_SSVI	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	29-64						
PY11K_PASV	HYPOTHETICAL 11.9 KD PROTEIN (ORF VI)	PANICUM STREAK VIRUS	29-61						
PY11K_ROTS1	HYPOTHETICAL 11 KD PROTEIN IN SEGMENT 5 11	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	53-87						
PY11K_TYDVA	HYPOTHETICAL 11.2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	28-62						
PY14K_NPVAC	HYPOTHETICAL 13.8 KD PROTEIN IN 39 K D PROTEIN 5'REG	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	65-101.						
PY18K_SSVI	HYPOTHETICAL 18.0 KD PROTEIN (ORF B-166)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-132.						
PY20K_SSVI	HYPOTHETICAL 20.4 KD PROTEIN (ORF B-178)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	129-167.						
PY21K_MSVN	HYPOTHETICAL 21.9 KD PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE) (MSV)	122-155.						
PY2_SOCMV	HYPOTHETICAL PROTEIN 2 (ORF II)	SOYBEAN CHLOROTIC MOTTLE VIRUS	99-137						
PY38K_NPVAC	HYPOTHETICAL 37.7 KD PROTEIN (ORF3)	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	250-282						
PY85K_SSV1	HYPOTHETICAL 85.7 KD PROTEIN (ORF C-792)	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	274-312	543-580					
PYB13_FOWPM	HYPOTHETICAL BAMHI-ORF13 PROTEIN (FRAGMENT)	FOWLPOX VIRUS (ISOLATE HP-438(MUNICH))	114-150						
PYDH1_HSVSC	HYPOTHETICAL 28.7 KD PROTEIN IN DHFR 3'REGION (ORF	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-244						
PYDH3_HSVSC	HYPOTHETICAL 9.5 KD PROTEIN IN DHFR 3'REGION (ORF3	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-97.						
PYEC4_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	34-68						
PYI01_CVBM	HYPOTHETICAL PROTEIN IORF1	BOVINE CORONAVIRUS	84-122						
PYI0R_CVBF	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (IORF)	BOVINE CORONAVIRUS (STRAIN F15)	41-75	137-165					
PYI0R_CVBM	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (IORF)	BOVINE CORONAVIRUS (STRAIN MEBUS)	41-74	137-165.					
PYI0R_CVPKE	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF (IORF)	TURKEY ENTERIC CORONAVIRUS (TCV)	41-74	137-165					
PYKR3_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-100						
PYM03_EBV	BMRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	250-284						
PYOR1_COYMV	HYPOTHETICAL 23 KD PROTEIN (ORF1)	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	93-130	166-198					
PYOR2_COYMV	HYPOTHETICAL 15 KD PROTEIN (ORF2)	COMMELINA YELLOW MOTTLE VIRUS (COYMV)	23-56						
PYORJ_PVXXC	HYPOTHETICAL 12 KD PROTEIN (ORF 3) (FRAGMENT)	POTATO VIRUS X (STRAIN XC) (PVX)	7-39						

BAD ORIGINAL

PGENE	PFUNCTION	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PCGENE	PFUNCTION	VIRUS	63-94						
PVCM_WCMVM	PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M) (WCMV)	64-95						
PVOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN (ORF 3)	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	237-272						
PVOR3_ADEGI	HYPOTHETICAL 13 KD PROTEIN (ORF 3)	AVIAN ADENOVIRUS GAL1	5-34						
PVOR3_ADEGI	HYPOTHETICAL 31.5 KD PROTEIN (ORF 3)	TIERSIOPROTEUS TENAX VIRUS 1 (STRAIN KIA1) (TTV1)	233-265						
PVORO_TTV1	HYPOTHETICAL 7.1 KD PROTEIN	TIERMOPROTEUS TENAX VIRUS 1 (STRAIN KIA1) (TTV1)	91-124						
PVORM_TTV1	HYPOTHETICAL 38.6 KD PROTEIN	TIERMOPROTEUS TENAX VIRUS 1 (STRAIN KIA1) (TTV1)	104-133	159-191					
PVORP_TTV1	HYPOTHETICAL 20.3 KD PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	104-133	159-191					
PVP24_RTBV	HYPOTHETICAL P24 PROTEIN (ORF 1	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTBV)	23-51.						
PVP24_RTBVP	HYPOTHETICAL P24 PROTEIN (ORF 1)	AUTOGRAPHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACNPV)	180-216						
PVP47_NPVAC	HYPOTHETICAL 41.5 KD PROTEIN IN P47 3'REGION	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	13-42						
PVRJ1_HSV6G	HYPOTHETICAL PROTEIN R5	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPES VIRUS 4)	92-120						
PVRJ2_EBV	HYPOTHETICAL BRLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPES VIRUS 4)	306-336						
PVSR1_EBV	HYPOTHETICAL BSRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPES VIRUS 4)	21-53						
PVTR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-49						
PVVAE_VACCC	HYPOTHETICAL 18.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR) AND VACCINIA VIRUS (STRAIN COPENHAGE	23-53						
PVVAL_VACCV	HYPOTHETICAL 9.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-53						
PVVBC_VACCC	HYPOTHETICAL 10.8 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGE	31-64.						
PVVD0_VACCV	HYPOTHETICAL 10.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	8-42						
PVVEF_VACCC	HYPOTHETICAL 11.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-35.						
PVVFC_VACCC	HYPOTHETICAL 11.6 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	24-57						
PZNFP_LYCVA	ZINC FINGER PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	8-37						
PZNFP_LYCVP	ZINC FINGER PROTEIN (FRAGMENT)	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN PASTEUR)	8-37						

BAD ORIGINAL

TABLE XV
RESPIRATORY SYNCYTIAL VIRUS DP107 F2 REGION ANALOG
CARBOXY TRUNCATIONS

X-YTS-Z
X-YTSV-Z
X-YTSVI-Z
X-YTSVIT-Z
X-YTSVITI-Z
X-YTSVITIE-Z
X-YTSVITIEL-Z
X-YTSVITIELS-Z
X-YTSVITIELSN-Z
X-YTSVITIELSNI-Z
X-YTSVITIELSNIK-Z
X-YTSVITIELSNIKE-Z
X-YTSVITIELSNIKEN-Z
X-YTSVITIELSNIKENK-Z
X-YTSVITIELSNIKENKC-Z
X-YTSVITIELSNIKENKCN-Z
X-YTSVITIELSNIKENKCNG-Z
X-YTSVITIELSNIKENKCNGT-Z
X-YTSVITIELSNIKENKCNGTD-Z
X-YTSVITIELSNIKENKCNGTDA-Z
X-YTSVITIELSNIKENKCNGTDAK-Z
X-YTSVITIELSNIKENKCNGTDAKV-Z
X-YTSVITIELSNIKENKCNGTDAKVK-Z
X-YTSVITIELSNIKENKCNGTDAKVKL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLI-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQE-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQEL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELD-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKY-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYK-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVT-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTE-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTEL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLL-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLM-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQ-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQS-Z
X-YTSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVI
RESPIRATORY SYNCYTIAL VIRUS F2 DP178/DP107 REGION ANALOG
AMINO TRUNCATIONS

X-QST-Z
X-MQST-Z
X-LMQST-Z
X-LLMQST-Z
X-QLLMQST-Z
X-LQLLMQST-Z
X-ELQLLMQST-Z
X-TELQLLMQST-Z
X-VTELQLLMQST-Z
X-AVTELQLLMQST-Z
X-NAVTELQLLMQST-Z
X-KNAVTELQLLMQST-Z
X-YKNAVTELQLLMQST-Z
X-KYKNAVTELQLLMQST-Z
X-DKYKNAVTELQLLMQST-Z
X-LDKYKNAVTELQLLMQST-Z
X-ELDKYKNAVTELQLLMQST-Z
X-QELDKYKNAVTELQLLMQST-Z
X-KQELDKYKNAVTELQLLMQST-Z
X-IKQELDKYKNAVTELQLLMQST-Z
X-LIKQELDKYKNAVTELQLLMQST-Z
X-KLIKQELDKYKNAVTELQLLMQST-Z
X-VKLIKQELDKYKNAVTELQLLMQST-Z
X-KVKLIKQELDKYKNAVTELQLLMQST-Z
X-AKVKLIKQELDKYKNAVTELQLLMQST-Z
X-DAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-GTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-CNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-KCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-KENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-IKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-NIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-SNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-LSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-ELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-IELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-ITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z
X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG
CARBOXY TRUNCATIONS

X-FYD-Z
X-FYDP-Z
X-FYDPL-Z
X-FYDPLV-Z
X-FYDPLVF-Z
X-FYDPLVFP-Z
X-FYDPLVFPS-Z
X-FYDPLVFPSD-Z
X-FYDPLVFPSDE-Z
X-FYDPLVFPSDEF-Z
X-FYDPLVFPSDEFD-Z
X-FYDPLVFPSDEFDA-Z
X-FYDPLVFPSDEFDAS-Z
X-FYDPLVFPSDEFDASI-Z
X-FYDPLVFPSDEFDASIS-Z
X-FYDPLVFPSDEFDASISQ-Z
X-FYDPLVFPSDEFDASISQV-Z
X-FYDPLVFPSDEFDASISQVN-Z
X-FYDPLVFPSDEFDASISQVNE-Z
X-FYDPLVFPSDEFDASISQVNEK-Z
X-FYDPLVFPSDEFDASISQVNEKI-Z
X-FYDPLVFPSDEFDASISQVNEKIN-Z
X-FYDPLVFPSDEFDASISQVNEKINQ-Z
X-FYDPLVFPSDEFDASISQVNEKINQS-Z
X-FYDPLVFPSDEFDASISQVNEKINQSL-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLA-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAF-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFI-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIR-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRK-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSD-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDE-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDEL-Z
X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier

group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XVIII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG
AMINO TRUNCATIONS

X-DELL-Z
X-SDELL-Z
X-KSDELL-Z
X-RKSDELL-Z
X-IRKSDELL-Z
X-FIRKSDELL-Z
X-AFIRKSDELL-Z
X-LAFIRKSDELL-Z
X-SLAFIRKSDELL-Z
X-QSLAFIRKSDELL-Z
X-NQSLAFIRKSDELL-Z
X-INQSLAFIRKSDELL-Z
X-KINQSLAFIRKSDELL-Z
X-EKINQSLAFIRKSDELL-Z
X-NEKINQSLAFIRKSDELL-Z
X-VNEKINQSLAFIRKSDELL-Z
X-QVNEKINQSLAFIRKSDELL-Z
X-SQVNEKINQSLAFIRKSDELL-Z
X-ISQVNEKINQSLAFIRKSDELL-Z
X-SISQVNEKINQSLAFIRKSDELL-Z
X-ASISQVNEKINQSLAFIRKSDELL-Z
X-DASISQVNEKINQSLAFIRKSDELL-Z
X-FDASISQVNEKINQSLAFIRKSDELL-Z
X-EFDASISQVNEKINQSLAFIRKSDELL-Z
X-DEFDASISQVNEKINQSLAFIRKSDELL-Z
X-SDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-PSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-FPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-VFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-LVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-PLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-DPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
X-YDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XIX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
CARBOXY TRUNCATIONS

X-ITL-Z
X-ITLN-Z
X-ITLNN-Z
X-ITLNNS-Z
X-ITLNNSV-Z
X-ITLNNSVA-Z
X-ITLNNSVAL-Z
X-ITLNNSVALD-Z
X-ITLNNSVALDP-Z
X-ITLNNSVALDPI-Z
X-ITLNNSVALDPID-Z
X-ITLNNSVALDPIDI-Z
X-ITLNNSVALDPIDIS-Z
X-ITLNNSVALDPIDISI-Z
X-ITLNNSVALDPIDISIE-Z
X-ITLNNSVALDPIDISIEL-Z
X-ITLNNSVALDPIDISIELN-Z
X-ITLNNSVALDPIDISIELNK-Z
X-ITLNNSVALDPIDISIELNKA-Z
X-ITLNNSVALDPIDISIELNKAK-Z
X-ITLNNSVALDPIDISIELNKAKS-Z
X-ITLNNSVALDPIDISIELNKAKSD-Z
X-ITLNNSVALDPIDISIELNKAKSDL-Z
X-ITLNNSVALDPIDISIELNKAKSDLE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEES-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESK-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEW-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWI-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
AMINO TRUNCATIONS

X-RRS-Z
X-IRRS-Z
X-WIRRS-Z
X-EWIRRS-Z
X-KEWIRRS-Z
X-SKEWIRRS-Z
X-ESKEWIRRS-Z
X-EESKEWIRRS-Z
X-LEESKEWIRRS-Z
X-DLEESKEWIRRS-Z
X-SDLEESKEWIRRS-Z
X-KSDLEESKEWIRRS-Z
X-AKSDLEESKEWIRRS-Z
X-KAKSDLEESKEWIRRS-Z
X-NKAKSDLEESKEWIRRS-Z
X-LNKAKSDLEESKEWIRRS-Z
X-ELNKAKSDLEESKEWIRRS-Z
X-IELNKAKSDLEESKEWIRRS-Z
X-SIELNKAKSDLEESKEWIRRS-Z
X-ISIELNKAKSDLEESKEWIRRS-Z
X-DISIELNKAKSDLEESKEWIRRS-Z
X-IDISIELNKAKSDLEESKEWIRRS-Z
X-PIDISIELNKAKSDLEESKEWIRRS-Z
X-DPIDISIELNKAKSDLEESKEWIRRS-Z
X-LDPIDISIELNKAKSDLEESKEWIRRS-Z
X-ALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-VALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-SVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-NSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-NNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
X-TLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXI
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG
CARBOXY TRUNCATIONS

X-ALG-Z
X-ALGV-Z
X-ALGVA-Z
X-ALGVAT-Z
X-ALGVATS-Z
X-ALGVATSA-Z
X-ALGVATSAQ-Z
X-ALGVATSAQI-Z
X-ALGVATSAQIT-Z
X-ALGVATSAQITA-Z
X-ALGVATSAQITAA-Z
X-ALGVATSAQITAAV-Z
X-ALGVATSAQITAAVA-Z
X-ALGVATSAQITAAVAL-Z
X-ALGVATSAQITAAVALV-Z
X-ALGVATSAQITAAVALVE-Z
X-ALGVATSAQITAAVALVEA-Z
X-ALGVATSAQITAAVALVEAK-Z
X-ALGVATSAQITAAVALVEAKQ-Z
X-ALGVATSAQITAAVALVEAKQA-Z
X-ALGVATSAQITAAVALVEAKQAR-Z
X-ALGVATSAQITAAVALVEAKQARS-Z
X-ALGVATSAQITAAVALVEAKQARSD-Z
X-ALGVATSAQITAAVALVEAKQARSDI-Z
X-ALGVATSAQITAAVALVEAKQARSDIE-Z
X-ALGVATSAQITAAVALVEAKQARSDIEK-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKL-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLK-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKE-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEA-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEAI-Z
X-ALGVATSAQITAAVALVEAKQARSDIEKLKEAIR-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXII
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG
AMINO TRUNCATIONS

X-IRD-Z
X-AIRD-Z
X-EAIRD-Z
X-KEAIRD-Z
X-LKEAIRD-Z
X-KLKEAIRD-Z
X-EKLKEAIRD-Z
X-IEKLKEAIRD-Z
X-DIEKLKEAIRD-Z
X-SDIEKLKEAIRD-Z
X-RSDIEKLKEAIRD-Z
X-ARSDIEKLKEAIRD-Z
X-QARSDIEKLKEAIRD-Z
X-KQARSDIEKLKEAIRD-Z
X-AKQARSDIEKLKEAIRD-Z
X-EAKQARSDIEKLKEAIRD-Z
X-VEAKQARSDIEKLKEAIRD-Z
X-LVEAKQARSDIEKLKEAIRD-Z
X-ALVEAKQARSDIEKLKEAIRD-Z
X-VALVEAKQARSDIEKLKEAIRD-Z
X-AVALVEAKQARSDIEKLKEAIRD-Z
X-AAVALVEAKQARSDIEKLKEAIRD-Z
X-TAAVALVEAKQARSDIEKLKEAIRD-Z
X-ITAAVALVEAKQARSDIEKLKEAIRD-Z
X-QITAAVALVEAKQARSDIEKLKEAIRD-Z
X-AQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-SAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-TSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-ATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-VATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-GVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
X-LGVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XXIII
REPRESENTATIVE DP107/DP178 ANALOG ANTIVIRAL PEPTIDES

Anti-Respiratory syncytial virus peptides

X-TSVITIELSNIKENKCNGTDAKVKLIKQELDKYKN-Z
X-SVITIELSNIKENKCNGTDAKVKLIKQELDKYKNA-Z
X-VITIELSNIKENKCNGTDAKVKLIKQELDKYKNAV-Z
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z
X-VAVSKVLHLEGEVNKIALLSTNKAVVSLSNGVS-Z
X-AVSKVLHLEGEVNKIALLSTNKAVVSLSNGVSV-Z
X-VSKVLHLEGEVNKIALLSTNKAVVSLSNGVSVL-Z
X-SKVLHLEGEVNKIALLSTNKAVVSLSNGVSVLT-Z
X-KVLHLEGEVNKIALLSTNKAVVSLSNGVSVLTS-Z
X-LEGEVNKIALLSTNKAVVSLSNGVSVLTSKVLD-Z
X-GEVNKIALLSTNKAVVSLSNGVSVLTSKVLDLK-Z
X-EVNKIALLSTNKAVVSLSNGVSVLTSKVLDLKN-Z
X-VNKIALLSTNKAVVSLSNGVSVLTSKVLDLKNY-Z
X-NKIALLSTNKAVVSLSNGVSVLTSKVLDLKNYI-Z
X-KIALLSTNKAVVSLSNGVSVLTSKVLDLKNYID-Z
X-IALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDK-Z
X-ALLSTNKAVVSLSNGVSVLTSKVLDLKNYIDKQ-Z

Anti-human parainfluenza virus 3 peptides

X-TLNNSVALDPIDISIELNKAKSDLEESKEWIRRSN-Z
X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRSNQ-Z
X-NNSVALDPIDISIELNKAKSDLEESKEWIRRSNQK-Z
X-NSVALDPIDISIELNKAKSDLEESKEWIRRSNQKL-Z
X-SVALDPIDISIELNKAKSDLEESKEWIRRSNQKLD-Z
X-VALDPIDISIELNKAKSDLEESKEWIRRSNQKLDS-Z
X-ALDPIDISIELNKAKSDLEESKEWIRRSNQKLDSI-Z
X-LDPIDISIELNKAKSDLEESKEWIRRSNQKLDSIG-Z
X-DPIDISIELNKAKSDLEESKEWIRRSNQKLDSIGN-Z
X-PIDISIELNKAKSDLEESKEWIRRSNQKLDSIGNW-Z
X-IDISIELNKAKSDLEESKEWIRRSNQKLDSIGNWH-Z
X-DISIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQ-Z
X-ISIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQS-Z
X-SIELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSS-Z
X-IELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSST-Z
X-ELNKAKSDLEESKEWIRRSNQKLDSIGNWHQSSTT-Z
X-TAAVALVEAKQARSDIEKLKEAIRDTNKAVQSVQS-Z

X-AVALVEAKQARSDIEKLKEAIRDTNKAVQSVQSSI-Z
X-LVEAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNL-Z
X-VEAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLI-Z
X-EAKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIV-Z
X-AKQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVA-Z
X-KQARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAI-Z
X-QARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIK-Z
X-ARSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKS-Z
X-RSDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKSV-Z
X-SDIEKLKEAIRDTNKAVQSVQSSIGNLIVAIKSVQ-Z
X-KLKEAIRDTNKAVQSVQSSIGNLIVAIKSVQDYVN-Z
X-LKEAIRDTNKAVQSVQSSIGNLIVAIKSVQDYVNK-Z
X-AIRDTNKAVQSVQSSIGNLIVAIKSVQDYVNKEIV-Z

Anti-simian immunodeficiency virus peptides

X-WQEWERKVDFLEENITALLEEAQIQQEKNMYELQK-Z
X-QEWERKVDFLEENITALLEEAQIQQEKNMYELQKL-Z
X-EWERKVDFLEENITALLEEAQIQQEKNMYELQKLN-Z
X-WERKVDFLEENITALLEEAQIQQEKNMYELQKLNS-Z
X-ERKVDFLEENITALLEEAQIQQEKNMYELQKLNSW-Z
X-RKVDFLEENITALLEEAQIQQEKNMYELQKLNSWD-Z
X-KVDFLEENITALLEEAQIQQEKNMYELQKLNSWDV-Z
X-VDFLEENITALLEEAQIQQEKNMYELQKLNSWDVF-Z
X-DFLEENITALLEEAQIQQEKNMYELQKLNSWDVFG-Z
X-FLEENITALLEEAQIQQEKNMYELQKLNSWDVFGN-Z

Anti-measles virus peptides

X-LHRIDLGPPISLERLDVGTNLGNAIAKLEAKELL-Z
X-HRIDLGPPISLERLDVGTNLGNAIAKLEAKELLE-Z
X-RIDLGPPISLERLDVGTNLGNAIAKLEAKELLES-Z
X-IDLGPPISLERLDVGTNLGNAIAKLEAKELLESS-Z
X-DLGPPISLERLDVGTNLGNAIAKLEAKELLESSD-Z
X-LGPPISLERLDVGTNLGNAIAKLEAKELLESSDQ-Z
X-GPPISLERLDVGTNLGNAIAKLEAKELLESSDQI-Z
X-PPISLERLDVGTNLGNAIAKLEAKELLESSDQIL-Z
X-PISLERLDVGTNLGNAIAKLEAKELLESSDQILR-Z
X-SLERLDVGTNLGNAIAKLEAKELLESSDQILRSM-Z
X-LERLDVGTNLGNAIAKLEAKELLESSDQILRSMK-Z

The one letter amino acid code is used.

Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

5.4. SYNTHESIS OF PEPTIDES

The peptides of the invention may be synthesized or prepared by techniques well known in the art. See, for example, Creighton, 1983, Proteins: Structures and Molecular Principles, W.H. Freeman and Co., NY, which is incorporated herein by reference in its entirety. Short peptides, for example, can be synthesized on a solid support or in solution. Longer peptides may be made using recombinant DNA techniques. Here, the nucleotide sequences encoding the peptides of the invention may be synthesized, and/or cloned, and expressed according to techniques well known to those of ordinary skill in the art. See, for example, Sambrook, et al., 1989, Molecular Cloning, A Laboratory Manual, Vols. 1-3, Cold Spring Harbor Press, NY.

The peptides of the invention may alternatively be synthesized such that one or more of the bonds which link the amino acid residues of the peptides are non-peptide bonds. These alternative non-peptide bonds may be formed by utilizing reactions well known to those in the art, and may include, but are not limited to imino, ester, hydrazide, semicarbazide, and azo bonds, to name but a few. In yet another embodiment of the invention, peptides comprising the sequences described above may be synthesized with additional chemical groups present at their amino and/or carboxy termini, such that, for example, the stability, bioavailability, and/or inhibitory activity of the peptides is enhanced. For example, hydrophobic groups such as carbobenzoxyl, dansyl, or t-butyloxycarbonyl groups, may be added to the peptides' amino termini. Likewise, an acetyl group or a 9-fluorenylmethoxy-carbonyl group may be placed at the peptides' amino termini. (See "X" in Tables I to IV,

above.) Additionally, the hydrophobic group, t-butyloxycarbonyl, or an amido group may be added to the peptides' carboxy termini. (See "Z" in Tables I to IV, above.)

Further, the peptides of the invention may be synthesized such that their steric configuration is altered. For example, the D-isomer of one or more of the amino acid residues of the peptide may be used, rather than the usual L-isomer.

Still further, at least one of the amino acid residues of the peptides of the invention may be substituted by one of the well known non-naturally occurring amino acid residues. Alterations such as these may serve to increase the stability, bioavailability and/or inhibitory action of the peptides of the invention.

Any of the peptides described above may, additionally, have a macromolecular carrier group covalently attached to their amino and/or carboxy termini. Such macromolecular carrier groups may include, for example, lipid-fatty acid conjugates, polyethylene glycol, carbohydrates or additional peptides. "X", in Tables I to IV, above, may therefore additionally represent any of the above macromolecular carrier groups covalently attached to the amino terminus of a peptide, with an additional peptide group being preferred. Likewise, "Z", in Tables I to IV, may additionally represent any of the macromolecular carrier groups described above.

5.5. ASSAYS FOR ANTI-MEMBRANE FUSION ACTIVITY

Described herein, are methods for ability of a compound, such as the peptides of the invention, to inhibit membrane fusion events. Specifically, assays for cell fusion events are described in Section 5.5.1,

below, and assays for antiviral activity are described in Section 5.5.2, below.

5.5.1 ASSAYS FOR CELL FUSION EVENTS

Assays for cell fusion events are well known to those of skill in the art, and may be used in conjunction, for example, with the peptides of the invention to test the peptides' antifusogenic capabilities.

Cell fusion assays are generally performed in vitro. Such an assay may comprise culturing cells which, in the absence of any treatment would undergo an observable level of syncytial formation. For example, uninfected cells may be incubated in the presence of cells chronically infected with a virus that induces cell fusion. Such viruses may include, but are not limited to, HIV, SIV, or respiratory syncytial virus.

For the assay, cells are incubated in the presence of a peptide to be assayed. For each peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added.

Standard conditions for culturing cells, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytial formation. Well known stains, such as crystal violet stain, may be used to facilitate the visualization of syncytial formation.

5.5.2 ASSAYS FOR ANTIVIRAL ACTIVITY

The antiviral activity exhibited by the peptides of the invention may be measured, for example, by

easily performed in vitro assays, such as those described below, which can test the peptides' ability to inhibit syncytia formation, or their ability to inhibit infection by cell-free virus. Using these assays, such parameters as the relative antiviral activity of the peptides, exhibit against a given strain of virus and/or the strain specific inhibitory activity of the peptide can be determined.

A cell fusion assay may be utilized to test the peptides' ability to inhibit viral-induced, such as HIV-induced, syncytia formation in vitro. Such an assay may comprise culturing uninfected cells in the presence of cells chronically infected with a syncytial-inducing virus and a peptide to be assayed. For each peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added. Standard conditions for culturing, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytia formation. Well known stains, such as crystal violet stain, may be used to facilitate syncytial visualization. Taking HIV as an example, such an assay would comprise $CD\text{-}4^+$ cells (such as Molt or CEM cells, for example) cultured in the presence of chronically HIV-infected cells and a peptide to be assayed.

Other well known characteristics of viral infection may also be assayed to test a peptide's antiviral capabilities. Once again taking HIV as an example, a reverse transcriptase (RT) assay may be utilized to test the peptides' ability to inhibit infection of $CD\text{-}4^+$ cells by cell-free HIV. Such an assay may comprise culturing an appropriate

concentration (i.e., $TCID_{50}$) of virus and CD-4$^+$ cells in the presence of the peptide to be tested. Culture conditions well known to those in the art are used. As above, a range of peptide concentrations may be used, in addition to a control culture wherein no peptide has been added. After incubation for an appropriate period (e.g., 7 days) of culturing, a cell-free supernatant is prepared, using standard procedures, and tested for the present of RT activity as a measure of successful infection. The RT activity may be tested using standard techniques such as those described by, for example, Goff et al. (Goff, S. et al., 1981, J. Virol. 38:239-248) and/or Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). These references are incorporated herein by reference in their entirety.

Standard methods which are well-known to those of skill in the art may be utilized for assaying non-retroviral activity. See, for example, Pringle et al. (Pringle, C.R. et al., 1985, J. Medical Virology 17:377-386) for a discussion of respiratory syncytial virus and parainfluenza virus activity assay techniques. Further, see, for example, "Zinsser Microbiology", 1988, Joklik, W.K. et al., eds., Appleton & Lange, Norwalk, CT, 19th ed., for a general review of such techniques. These references are incorporated by reference herein in their entirety. In addition, the Examples presented below, in Sections 17, 18, 26 and 27 each provide additional assays for the testing of a compound's antiviral capability.

In vivo assays may also be utilized to test, for example, the antiviral activity of the peptides of the invention. To test for anti-HIV activity, for example, the in vivo model described in Barnett et al. (Barnett, S.W. et al., 1994, Science 266:642-646) may be used.

Additionally, anti-RSV activity can be assayed in vivo via well known mouse models. For example, RSV can be administered intranasally to mice of various inbred strains. Virus replicates in lungs of all strains, but the highest titers are obtained in P/N, C57L/N and DBA/2N mice. Infection of BALB/c mice produces an asymptomatic bronchiolitis characterized by lymphocytic infiltrates and pulmonary virus titers of 10^4 to 10^5 pfu/g of lung tissue (Taylor, G. et al., 1984, Infect. Immun. 43:649-655).

Cotton rat models of RSV are also well known. Virus replicates to high titer in the nose and lungs of the cotton rat but produces few if any signs of inflammation.

5.6. USES OF THE PEPTIDES OF THE INVENTION

The peptides of the invention may be utilized as antifusogenic or antiviral compounds, or as compounds which modulate intracellular processes involving coiled coil peptide structures. Further, such peptides may be used to identify agents which exhibit antifusogenic, antiviral or intracellular modulatory activity. Still further, the peptides of the invention may be utilized as organism or viral type/subtype-specific diagnostic tools.

The antifusogenic capability of the peptides of the invention may additionally be utilized to inhibit or treat/ameliorate symptoms caused by processes involving membrane fusion events. Such events may include, for example, virus transmission via cell-cell fusion, abnormal neurotransmitter exchange via cell-fusion, and sperm-egg fusion. Further, the peptides of the invention may be used to inhibit free viral, such as retroviral, particularly HIV, transmission to uninfected cells wherein such viral infection involves membrane fusion events or involves fusion of a viral

structure with a cell membrane. Among the intracellular disorders involving coiled coil peptides structures which may be ameliorated by the peptides of the invention are disorders involving, for example, bacterial toxins.

With respect to antiviral activity, the viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to all strains of the viruses listed above, in Tables V through VII, and IX through XIV.

These viruses include, for example, human retroviruses, particularly HIV-1 and HIV-2 and the human T-lymphocyte viruses (HTLV-I and II). The non-human retroviruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to bovine leukosis virus, feline sarcoma and leukemia viruses, simian immunodeficiency, sarcoma and leukemia viruses, and sheep progress pneumonia viruses.

Non retroviral viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to human respiratory syncytial virus, canine distemper virus, newcastle disease virus, human parainfluenza virus, influenza viruses, measles viruses, Epstein-Barr viruses, hepatitis B viruses, and simian Mason-Pfizer viruses.

Non enveloped viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to picornaviruses such as polio viruses, hepatitis A virus, enterovirus, echoviruses and coxsackie viruses, papovaviruses such as papilloma virus, parvoviruses, adenoviruses and reoviruses.

As discussed more fully, below, in Section 5.5.1 and in the Example presented, below, in Section 8, DP107, DP178, DP107 analog and DP178 analog peptides form non-covalent protein-protein interactions which

are required for normal activity of the virus. Thus, the peptides of the invention may also be utilized as components in assays for the identification of compounds that interfere with such protein-protein interactions and may, therefore, act as antiviral agents. These assays are discussed, below, in Section 5.5.1.

As demonstrated in the Example presented below in Section 6, the antiviral activity of the peptides of the invention may show a pronounced type and subtype specificity, i.e., specific peptides may be effective in inhibiting the activity of only specific viruses. This feature of the invention presents many advantages. One such advantage, for example, lies in the field of diagnostics, wherein one can use the antiviral specificity of the peptide of the invention to ascertain the identity of a viral isolate. With respect to HIV, one may easily determine whether a viral isolate consists of an HIV-1 or HIV-2 strain. For example, uninfected CD-4$^+$ cells may be co-infected with an isolate which has been identified as containing HIV the DP178 (SEQ ID:1) peptide, after which the retroviral activity of cell supernatants may be assayed, using, for example, the techniques described above in Section 5.2. Those isolates whose retroviral activity is completely or nearly completely inhibited contain HIV-1. Those isolates whose viral activity is unchanged or only reduced by a small amount, may be considered to not contain HIV-1. Such an isolate may then be treated with one or more of the other DP178 peptides of the invention, and subsequently be tested for its viral activity in order to determine the identify of the viral isolate. The DP107 and DP178 analogs of the invention may also be utilized in a diagnostic capacity specific to the type and subtype of virus or organism in which the specific

peptide sequence is found. A diagnostic procedure as described, above, for DP178, may be used in conjunction with the DP107/DP178 analog of interest.

5.5.1. SCREENING ASSAYS

As demonstrated in the Example presented in Section 8, below, DP107 and DP178 portions of the TM protein gp41 form non-covalent protein-protein interactions. As is also demonstrated, the maintenance of such interactions is necessary for normal viral infectivity. Thus, compounds which bind DP107, bind DP178, and/or act to disrupt normal DP107/DP178 protein-protein interactions may act as antifusogenic, antiviral or cellular modulatory agents. Described below are assays for the identification of such compounds. Note that, while, for ease and clarity of discussion, DP107 and DP178 peptides will be used as components of the assays described, but it is to be understood that any of the DP107 analog or DP178 analog peptides described, above, in Sections 5.1 through 5.3 may also be utilized as part of these screens for compounds.

Compounds which may be tested for an ability to bind DP107, DP178, and/or disrupt DP107/DP178 interactions, and which therefore, potentially represent antifusogenic, antiviral or intracellular modulatory compounds, include, but are not limited to, peptides made of D- and/or L-configuration amino acids (in, for example, the form of random peptide libraries; see Lam, K.S. et al., 1991, Nature 354:82-84), phosphopeptides (in, for example, the form of random or partially degenerate, directed phosphopeptide libraries; see, for example, Songyang, Z. et al., 1993, Cell 72:767-778), antibodies, and small organic or inorganic molecules. Synthetic compounds, natural products, and other sources of

potentially effective materials may be screened in a variety of ways, as described in this Section.

The compounds, antibodies, or other molecules identified may be tested, for example, for an ability to inhibit cell fusion or viral activity, utilizing, for example, assays such as those described, above, in Section 5.5.

Among the peptides which may be tested are soluble peptides comprising DP107 and/or DP178 domains, and peptides comprising DP107 and/or DP178 domains having one or more mutations within one or both of the domains, such as the M41-P peptide described, below, in the Example presented in Section 8, which contains a isoleucine to proline mutation within the DP178 sequence.

In one embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

(a) exposing at least one compound to a peptide comprising a DP107 peptide for a time sufficient to allow binding of the compound to the DP107 peptide;

(b) removing non-bound compounds; and

(c) determining the presence of the compound bound to the DP107 peptide,

thereby identifying an agent to be tested for antiviral ability.

In a second embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

(a) exposing at least one compound to a peptide comprising a DP178 peptide for a time sufficient to allow binding of the compound to the DP178 peptide;

(b) removing non-bound compounds; and

(c) determining the presence of the compound bound to the DP178 peptide, thereby identifying an agent to be tested for antiviral ability.

One method utilizing these types of approaches that may be pursued in the isolation of such DP107-binding or DP178-binding compounds is an assay which would include the attachment of either the DP107 or the DP178 peptide to a solid matrix, such as, for example, agarose or plastic beads, microtiter plate wells, petri dishes, or membranes composed of, for example, nylon or nitrocellulose. In such an assay system, either the DP107 or DP178 protein may be anchored onto a solid surface, and the compound, or test substance, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored component may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface with a solution of the protein and drying.

Alternatively, an immobilized antibody, preferably a monoclonal antibody, specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

In order to conduct the assay, the labeled compound is added to the coated surface containing the anchored DP107 or DP178 peptide. After the reaction is complete, unreacted components are removed (e.g., by washing) under conditions such that any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the compound is pre-labeled, the detection of label immobilized on the surface indicates that

complexes were formed. Where the labeled component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the compound (the antibody, in turn, may be directly labeled or indirectly labeled with a labeled anti-Ig antibody).

Alternatively, such an assay can be conducted in a liquid phase, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for DP107 or DP178, whichever is appropriate for the given assay, or ab antibody specific for the compound, i.e., the test substance, in order to anchor any complexes formed in solution, and a labeled antibody specific for the other member of the complex to detect anchored complexes.

By utilizing procedures such as this, large numbers of types of molecules may be simultaneously screened for DP107 or DP178-binding capability, and thus potential antiviral activity.

Further, compounds may be screened for an ability to inhibit the formation of or, alternatively, disrupt DP107/DP178 complexes. Such compounds may then be tested for antifusogenic, antiviral or intercellular modulatory capability. For ease of description, DP107 and DP178 will be referred to as "binding partners." Compounds that disrupt such interactions may exhibit antiviral activity. Such compounds may include, but are not limited to molecules such as antibodies, peptides, and the like described above.

The basic principle of the assay systems used to identify compounds that interfere with the interaction between the DP107 and DP178 peptides involves preparing a reaction mixture containing peptides under conditions and for a time sufficient to allow the two peptides to interact and bind, thus forming a complex.

In order to test a compound for disruptive activity, the reaction is conducted in the presence and absence of the test compound, i.e., the test compound may be initially included in the reaction mixture, or added at a time subsequent to the addition of one of the binding partners; controls are incubated without the test compound or with a placebo. The formation of any complexes between the binding partners is then detected. The formation of a complex in the control reaction, but not in the reaction mixture containing the test compound indicates that the compound interferes with the interaction of the DP107 and DP178 peptides.

The assay for compounds that interfere with the interaction of the binding partners can be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring one of the binding partners onto a solid phase and detecting complexes anchored on the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the binding partners, e.g., by competition, can be identified by conducting the reaction in the presence of the test substance; i.e., by adding the test substance to the reaction mixture prior to or simultaneously with the binding partners. On the other hand, test compounds that disrupt preformed complexes, e.g. compounds with higher binding constants that displace one of the binding partners from the complex, can be tested by adding the test compound to the reaction mixture after complexes have

been formed. The various formats are described briefly below.

In a heterogeneous assay system, one binding partner, e.g., either the DP107 or DP178 peptide, is anchored onto a solid surface, and its binding partner, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored species may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface with a solution of the protein and drying. Alternatively, an immobilized antibody specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

In order to conduct the assay, the binding partner of the immobilized species is added to the coated surface with or without the test compound. After the reaction is complete, unreacted components are removed (e.g., by washing) and any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the binding partner was pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the binding partner is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the binding partner (the antibody, in turn, may be directly labeled or indirectly labeled with a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which inhibit complex formation or which disrupt preformed complexes can be detected.

Alternatively, the reaction can be conducted in a liquid phase in the presence or absence of the test compound, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for one binding partner to anchor any complexes formed in solution, and a labeled antibody specific for the other binding partner to detect anchored complexes. Again, depending upon the order of addition of reactants to the liquid phase, test compounds which inhibit complex or which disrupt preformed complexes can be identified.

In an alternate embodiment of the invention, a homogeneous assay can be used. In this approach, a preformed complex of the DP107 and DP178 peptides is prepared in which one of the binding partners is labeled, but the signal generated by the label is quenched due to complex formation (see, e.g., U.S. Patent No. 4,109,496 by Rubenstein which utilizes this approach for immunoassays). The addition of a test substance that competes with and displaces one of the binding partners from the preformed complex will result in the generation of a signal above background. In this way, test substances which disrupt DP-107/ DP-178 protein-protein interaction can be identified.

In an alternative screening assay, test compounds may be assayed for the their ability to disrupt a DP178/DP107 interaction, as measured immunometrically using an antibody specifically reactive to a DP107/DP178 complex (i.e., an antibody that recognizes neither DP107 nor DP178 individually). Such an assay acts as a competition assay, and is based on techniques well known to those of skill in the art.

The above competition assay may be described, by way of example, and not by way of limitation, by using the DP178 and M41Δ178 peptides and by assaying test

compounds for the disruption of the complexes formed by these two peptides by immunometrically visualizing DP178/M41Δ178 complexes via the human recombinant Fab, Fab-d, as described, below, in the Example presented in Section 8. M41Δ178 is a maltose binding fusion protein containing a gp41 region having its DP178 domain deleted, and is described, below, in the Example presented in Section 8.

Utilizing such an assay, M41Δ178 may be immobilized onto solid supports such as microtiter wells. A series of dilutions of a test compound may then be added to each M41Δ178-containing well in the presence of a constant concentration of DP-178 peptide. After incubation, at, for example, room temperature for one hour, unbound DP-178 and test compound are removed from the wells and wells are then incubated with the DP178/M41Δ178-specific Fab-d antibody. After incubation and washing, unbound Fab-d is removed from the plates and bound Fab-d is quantitated. A no-inhibitor control should also be conducted. Test compounds showing an ability to disrupt DP178/M41Δ178 complex formation are identified by their concentration-dependent decrease in the level of Fab-d binding.

A variation of such an assay may be utilized to perform a rapid, high-throughput binding assay which is capable of directly measuring DP178 binding to M41Δ178 for the determination of binding constants of the ligand of inhibitory constants for competitors of DP178 binding.

Such an assay takes advantage of accepted radioligand and receptor binding principles. (See, for example, Yamamura, H.I. et al., 1985, "Neurotransmitter Receptor Binding", 2nd ed., Raven Press, NY.) As above, M41Δ178 is immobilized onto a solid support such as a microtiter well. DP178

binding to M41Δ178 is then quantitated by measuring the fraction of DP178 that is bound as ^{125}I-DP178 and calculating the total amount bound using a value for specific activity (dpm/μg peptide) determined for each labeled DP178 preparation. Specific binding to M41Δ178 is defined as the difference of the binding of the labeled DP178 preparation in the microtiter wells (totals) and the binding in identical wells containing, in addition, excess unlabeled DP178 (nonspecifics).

5.5 PHARMACEUTICAL FORMULATIONS, DOSAGES AND MODES OF ADMINISTRATION

The peptides of the invention may be administered using techniques well known to those in the art. Preferably, agents are formulated and administered systemically. Techniques for formulation and administration may be found in "Remington's Pharmaceutical Sciences", 18th ed., 1990, Mack Publishing Co., Easton, PA. Suitable routes may include oral, rectal, transmucosal, or intestinal administration; parenteral delivery, including intramuscular, subcutaneous, intramedullary injections, as well as, intrathecal, direct intraventricular, intravenous, intraperitoneal, intranasal, or intraocular injections, just to name a few. For injection, the agents of the invention may be formulated in aqueous solutions, preferably in physiologically compatible buffers such as Hanks' solution, Ringer's solution, or physiological saline buffer. For such transmucosal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art.

In instances wherein intracellular administration of the peptides of the invention or other inhibitory

agents is preferred, techniques well known to those of ordinary skill in the art may be utilized. For example, such agents may be encapsulated into liposomes, then administered as described above. Liposomes are spherical lipid bilayers with aqueous interiors. All molecules present in an aqueous solution at the time of liposome formation are incorporated into the aqueous interior. The liposomal contents are both protected from the external microenvironment and, because liposomes fuse with cell membranes, are effectively delivered into the cell cytoplasm. Additionally, due to their hydrophobicity, when small molecules are to be administered, direct intracellular administration may be achieved.

Nucleotide sequences encoding the peptides of the invention which are to be intracellularly administered may be expressed in cells of interest, using techniques well known to those of skill in the art. For example, expression vectors derived from viruses such as retroviruses, vaccinia viruses, adeno-associated viruses, herpes viruses, or bovine papilloma viruses, may be used for delivery and expression of such nucleotide sequences into the targeted cell population. Methods for the construction of such vectors and expression constructs are well known. See, for example, Sambrook et al., 1989, Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Press, Cold Spring Harbor NY, and Ausubel et al., 1989, Current Protocols in Molecular Biology, Greene Publishing Associates and Wiley Interscience, NY.

With respect to HIV, peptides of the invention, particularly DP107 and DP178, may be used as therapeutics in the treatment of AIDS. In addition, the peptides may be used as prophylactic measures in previously uninfected individuals after acute exposure

to an HIV virus. Examples of such prophylactic use of the peptides may include, but are not limited to, prevention of virus transmission from mother to infant and other settings where the likelihood of HIV transmission exists, such as, for example, accidents in health care settings wherein workers are exposed to HIV-containing blood products. The successful use of such treatments do not rely upon the generation of a host immune response directed against such peptides.

Effective dosages of the peptides of the invention to be administered may be determined through procedures well known to those in the art which address such parameters as biological half-life, bioavailability, and toxicity. Given the data presented below in Section 6, DP178, for example, may prove efficacious in vivo at doses required to achieve circulating levels of about 1 to about 10 ng per ml of peptide.

A therapeutically effective dose refers to that amount of the compound sufficient to result in amelioration of symptoms or a prolongation of survival in a patient. Toxicity and therapeutic efficacy of such compounds can be determined by standard pharmaceutical procedures in cell cultures or experimental animals, e.g., for determining the LD_{50} (the dose lethal to 50% of the population) and the ED50 (the dose therapeutically effective in 50% of the population). The dose ratio between toxic and therapeutic effects is the therapeutic index and it can be expressed as the ratio LD_{50}/ED_{50}. Compounds which exhibit large therapeutic indices are preferred. The data obtained from these cell culture assays and animal studies can be used in formulating a range of dosage for use in humans. The dosage of such compounds lies preferably within a range of circulating concentrations that include the ED50 with

little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. For any compound used in the method of the invention, the therapeutically effective dose can be estimated initially from cell culture assays. A dose may be formulated in animal models to achieve a circulating plasma concentration range that includes the IC_{50} (e.g., the concentration of the test compound which achieves a half-maximal inhibition of the fusogenic event, such as a half-maximal inhibition of viral infection relative to the amount of the event in the absence of the test compound) as determined in cell culture. Such information can be used to more accurately determine useful doses in humans. Levels in plasma may be measured, for example, by high performance liquid chromatography (HPLC).

The peptides of the invention may, further, serve the role of a prophylactic vaccine, wherein the host raises antibodies against the peptides of the invention, which then serve to neutralize HIV viruses by, for example, inhibiting further HIV infection.

Administration of the peptides of the invention as a prophylactic vaccine, therefore, would comprise administering to a host a concentration of peptides effective in raising an immune response which is sufficient to neutralize HIV, by, for example, inhibiting HIV ability to infect cells. The exact concentration will depend upon the specific peptide to be administered, but may be determined by using standard techniques for assaying the development of an immune response which are well known to those of ordinary skill in the art. The peptides to be used as vaccines are usually administered intramuscularly.

The peptides may be formulated with a suitable adjuvant in order to enhance the immunological

response. Such adjuvants may include, but are not limited to mineral gels such as aluminum hydroxide; surface active substances such as lysolecithin, pluronic polyols, polyanions; other peptides; oil emulsions; and potentially useful human adjuvants such as BCG and Corynebacterium parvum. Many methods may be used to introduce the vaccine formulations described here. These methods include but are not limited to oral, intradermal, intramuscular, intraperitoneal, intravenous, subcutaneous, and intranasal routes.

Alternatively, an effective concentration of polyclonal or monoclonal antibodies raised against the peptides of the invention may be administered to a host so that no uninfected cells become infected by HIV. The exact concentration of such antibodies will vary according to each specific antibody preparation, but may be determined using standard techniques well known to those of ordinary skill in the art. Administration of the antibodies may be accomplished using a variety of techniques, including, but not limited to those described in this section.

For all such treatments described above, the exact formulation, route of administration and dosage can be chosen by the individual physician in view of the patient's condition. (See e.g. Fingl et al., 1975, in "The Pharmacological Basis of Therapeutics", Ch. 1 p1).

It should be noted that the attending physician would know how to and when to terminate, interrupt, or adjust administration due to toxicity, or to organ dysfunctions. Conversely, the attending physician would also know to adjust treatment to higher levels if the clinical response were not adequate (precluding toxicity). The magnitude of an administrated dose in the management of the oncogenic disorder of interest

will vary with the severity of the condition to be treated and the route of administration. The dose and perhaps dose frequency, will also vary according to the age, body weight, and response of the individual patient. A program comparable to that discussed above may be used in veterinary medicine.

Use of pharmaceutically acceptable carriers to formulate the compounds herein disclosed for the practice of the invention into dosages suitable for systemic administration is within the scope of the invention. With proper choice of carrier and suitable manufacturing practice, the compositions of the present invention, in particular, those formulated as solutions, may be administered parenterally, such as by intravenous injection. The compounds can be formulated readily using pharmaceutically acceptable carriers well known in the art into dosages suitable for oral administration. Such carriers enable the compounds of the invention to be formulated as tablets, pills, capsules, liquids, gels, syrups, slurries, suspensions and the like, for oral ingestion by a patient to be treated.

Pharmaceutical compositions suitable for use in the present invention include compositions wherein the active ingredients are contained in an effective amount to achieve its intended purpose. Determination of the effective amounts is well within the capability of those skilled in the art, especially in light of the detailed disclosure provided herein.

In addition to the active ingredients, these pharmaceutical compositions may contain suitable pharmaceutically acceptable carriers comprising excipients and auxiliaries which facilitate processing of the active compounds into preparations which can be used pharmaceutically. The preparations formulated

for oral administration may be in the form of tablets, dragees, capsules, or solutions.

The pharmaceutical compositions of the present invention may be manufactured in a manner that is itself known, e.g., by means of conventional mixing, dissolving, granulating, dragee-making, levigating, emulsifying, encapsulating, entrapping or lyophilizing processes.

Pharmaceutical formulations for parenteral administration include aqueous solutions of the active compounds in water-soluble form. Additionally, suspensions of the active compounds may be prepared as appropriate oily injection suspensions. Suitable lipophilic solvents or vehicles include fatty oils such as sesame oil, or synthetic fatty acid esters, such as ethyl oleate or triglycerides, or liposomes. Aqueous injection suspensions may contain substances which increase the viscosity of the suspension, such as sodium carboxymethyl cellulose, sorbitol, or dextran. Optionally, the suspension may also contain suitable stabilizers or agents which increase the solubility of the compounds to allow for the preparation of highly concentrated solutions.

Pharmaceutical preparations for oral use can be obtained by combining the active compounds with solid excipient, optionally grinding a resulting mixture, and processing the mixture of granules, after adding suitable auxiliaries, if desired, to obtain tablets or dragee cores. Suitable excipients are, in particular, fillers such as sugars, including lactose, sucrose, mannitol, or sorbitol; cellulose preparations such as, for example, maize starch, wheat starch, rice starch, potato starch, gelatin, gum tragacanth, methyl cellulose, hydroxypropylmethyl-cellulose, sodium carboxymethylcellulose, and/or polyvinylpyrrolidone (PVP). If desired, disintegrating agents may be

added, such as the cross-linked polyvinyl pyrrolidone, agar, or alginic acid or a salt thereof such as sodium alginate.

Dragee cores are provided with suitable coatings. For this purpose, concentrated sugar solutions may be used, which may optionally contain gum arabic, talc, polyvinyl pyrrolidone, carbopol gel, polyethylene glycol, and/or titanium dioxide, lacquer solutions, and suitable organic solvents or solvent mixtures. Dyestuffs or pigments may be added to the tablets or dragee coatings for identification or to characterize different combinations of active compound doses.

Pharmaceutical preparations which can be used orally include push-fit capsules made of gelatin, as well as soft, sealed capsules made of gelatin and a plasticizer, such as glycerol or sorbitol. The push-fit capsules can contain the active ingredients in admixture with filler such as lactose, binders such as starches, and/or lubricants such as talc or magnesium stearate and, optionally, stabilizers. In soft capsules, the active compounds may be dissolved or suspended in suitable liquids, such as fatty oils, liquid paraffin, or liquid polyethylene glycols. In addition, stabilizers may be added.

6. EXAMPLE: DP178 (SEQ ID:1) IS A POTENT INHIBITOR OF HIV-1 INFECTION

In this example, DP178 (SEQ ID:1) is shown to be a potent inhibitor of HIV-1 mediated CD-4$^+$ cell-cell fusion and infection by cell free virus. In the fusion assay, this peptide completely blocks virus induced syncytia formation at concentrations of from 1-10 ng/ml. In the infectivity assay the inhibitory concentration is somewhat higher, blocking infection at 90ng/ml. It is further shown that DP178 (SEQ ID:1) shows that the antiviral activity of DP178 (SEQ ID:1)

is highly specific for HIV-1. Additionally, a synthetic peptide, DP-185 (SEQ ID:3), representing a HIV-1-derived DP178 homolog is also found to block HIV-1-mediated syncytia formation.

6.1. MATERIALS AND METHODS

6.1.1. PEPTIDE SYNTHESIS

Peptides were synthesized using Fast Moc chemistry on an Applied Biosystems Model 431A peptide synthesizer. Generally, unless otherwise noted, the peptides contained amidated carboxy termini and acetylated amino termini. Amidated peptides were prepared using Rink resin (Advanced Chemtech) while peptides containing free carboxy termini were synthesized on Wang (p-alkoxy-benzyl-alcohol) resin (Bachem). First residues were double coupled to the appropriate resin and subsequent residues were single coupled. Each coupling step was followed by acetic anhydride capping. Peptides were cleaved from the resin by treatment with trifluoracetic acid (TFA) (10ml), H_2O (0.5ml), thioanisole (0.5ml), ethanedithiol (0.25ml), and crystalline phenol (0.75g). Purification was carried out by reverse phase HPLC. Approximately 50mg samples of crude peptide were chromatographed on a Waters Delta Pak C18 column (19mm x 30cm, 15μ spherical) with a linear gradient; H_2O/acetonitrile 0.1% TFA. Lyophilized peptides were stored desiccated and peptide solutions were made in water at about 1mg/ml. Electrospray mass spectrometry yielded the following results: DP178 (SEQ ID:1):4491.87 (calculated 4491.94); DP-180 (SEQ ID:2):4491.45 (calculated 4491.94); DP-185 (SEQ ID:3):not done (calculated 4546.97).

6.1.2. VIRUS

The HIV-1_{LAI} virus was obtained from R. Gallo (Popovic, M. et al., 1984, Science 224:497-508) and propagated in CEM cells cultured in RPMI 1640 containing 10% fetal calf serum. Supernatant from the infected CEM cells was passed through a 0.2μm filter and the infectious titer estimated in a microinfectivity assay using the AA5 cell line to support virus replication. For this purpose, 25μl of serial diluted virus was added to 75μl AA5 cells at a concentration of 2 x 10^5/ml in a 96-well microtitre plate. Each virus dilution was tested in triplicate. Cells were cultured for eight days by addition of fresh medium every other day. On day 8 post infection, supernatant samples were tested for virus replication as evidenced by reverse transcriptase activity released to the supernatant. The $TCID_{50}$ was calculated according to the Reed and Muench formula (Reed, L.J. et al., 1938, Am. J. Hyg. 27:493-497). The titer of the HIV-1_{LAI} and HIV-1_{MN} stocks used for these studies, as measured on the AA5 cell line, was approximately 1.4 x 10^6 and 3.8 x 10^4 $TCID_{50}$/ml, respectively.

6.1.3. CELL FUSION ASSAY

Approximately 7 x 10^4 Molt cells were incubated with 1 x 10^4 CEM cells chronically infected with the HIV-1_{LAI} virus in 96-well plates (one-half area cluster plates; Costar, Cambridge, MA) in a final volume of 100μl culture medium as previously described (Matthews, T.J. et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5428). Peptide inhibitors were added in a volume of 10μl and the cell mixtures were incubated for 24 hr. at 37°C. At that time, multinucleated giant cells were estimated by microscopic examination

at a 40x magnification which allowed visualization of the entire well in a single field.

6.1.4. CELL FREE VIRUS INFECTION ASSAY

Synthetic peptides were incubated at 37°C with either 247 $TCID_{50}$ (for experiment depicted in FIG. 2), or 62 $TCID_{50}$ (for experiment depicted in FIG.3) units of HIV-1_{LAI} virus or 25 $TCID_{50}$ units of HIV-2_{NIHZ} and CEM $CD4^+$ cells at peptide concentrations of 0, 0.04, 0.4, 4.0, and 40μg/ml for 7 days. The resulting reverse transcriptase (RT) activity in counts per minute was determined using the assay described, below, in Section 6.1.5. See, Reed, L.J. et al., 1938, Am. J. Hyg. 27: 493-497 for an explanation of $TCID_{50}$ calculations.

6.1.5. REVERSE TRANSCRIPTASE ASSAY

The micro-reverse transcriptase (RT) assay was adapted from Goff et al. (Goff, S. et al., 1981, J. Virol. 38:239-248) and Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). Supernatants from virus/cell cultures are adjusted to 1% Triton-X100. A 10μl sample of supernatant was added to 50μl of RT cocktail in a 96-well U-bottom microtitre plate and the samples incubated at 37°C for 90 min. The RT cocktail contained 75mM KCl, 2mM dithiothreitol, 5mM $MgCl_2$, 5μg/ml poly A (Pharmacia, cat. No. 27-4110-01), 0.25 units/ml oligo dT (Pharmacia, cat. No. 27-7858-01), 0.05% NP40, 50mM Tris-HCl, pH 7.8, 0.5μM non-radioactive dTTP, and 10μCi/ml ^{32}P-dTTP (Amersham, cat. No. PB.10167).

After the incubation period, 40μl of reaction mixture was applied to a Schleicher and Schuell (S+S) NA45 membrane (or DE81 paper) saturated in 2 x SSC buffer (0.3M NaCl and 0.003M sodium citrate) held in a S+S Minifold over one sheet of GB003 (S+S) filter

paper, with partial vacuum applied. Each well of the minifold was washed four times with 200μl 2xSSC, under full vacuum. The membrane was removed from the minifold and washed 2 more times in a pyrex dish with an excess of 2xSSC. Finally, the membrane was drained on absorbent paper, placed on Whatman #3 paper, covered with Saran wrap, and exposed to film overnight at -70°C.

6.2. RESULTS

6.2.1. PEPTIDE INHIBITION OF INFECTED CELL-INDUCED SYNCYTIA FORMATION

The initial screen for antiviral activity assayed peptides' ability to block syncytium formation induced by overnight co-cultivation of uninfected Molt4 cells with chronically HIV-1 infected CEM cells. The results of several such experiments are presented herein. In the first of these experiments, serial DP178 (SEQ ID:1) peptide concentrations between 10μg/ml and 12.5ng/ml were tested for blockade of the cell fusion process. For these experiments, CEM cells chronically infected with either HIV-1_{LAI}, HIV-1_{MN}, HIV-1_{RF}, or HIV-1_{SF2} virus were cocultivated overnight with uninfected Molt 4 cells. The results (FIG. 4) show that DP178 (SEQ ID:1) afforded complete protection against each of the HIV-1 isolates down to the lowest concentration of DP178 (SEQ ID:1) used. For HIV_{LAI} inhibition, the lowest concentration tested was 12.5ng/ml; for all other HIV-1 viruses, the lowest concentration of DP178 (SEQ ID:1) used in this study was 100ng/ml. A second peptide, DP-180 (SEQ ID:2), containing the same amino acid residues as DP178 (SEQ ID:1) but arranged in a random order exhibited no evidence of anti-fusogenic activity even at the high concentration of 40μg/ml (FIG. 4). These observations indicate that the inhibitory effect of DP178 (SEQ

ID:1) is primary sequence-specific and not related to non-specific peptide/protein interactions. The actual endpoint (i.e., the lowest effective inhibitory concentration) of DP178 inhibitory action is within the range of 1-10 ng/ml.

The next series of experiments involved the preparation and testing of a DP178 (SEQ ID:1) homolog for its ability to inhibit HIV-1-induced syncytia formation. As shown in FIG. 1, the sequence of DP-185 (SEQ ID:3) is slightly different from DP178 (SEQ ID:1) in that its primary sequence is taken from the HIV-1_{SF2} isolate and contains several amino acid differences relative to DP178 (SEQ ID:1) near the N terminus. As shown in FIG. 4, DP-185 (SEQ ID:3), exhibits inhibitory activity even at 312.5ng/ml, the lowest concentration tested.

The next series of experiments involved a comparison of DP178 (SEQ ID:1) HIV-1 and HIV-2 inhibitory activity. As shown in FIG. 5, DP178 (SEQ ID:1) blocked HIV-1-mediated syncytia formation at peptide concentrations below 1ng/ml. DP178 (SEQ ID:1) failed, however, to block HIV-2 mediated syncytia formation at concentrations as high as 10μg/ml. This striking 4 log selectivity of DP178 (SEQ ID:1) as an inhibitor of HIV-1-mediated cell fusion demonstrates an unexpected HIV-1 specificity in the action of DP178 (SEQ ID:1). DP178 (SEQ ID:1) inhibition of HIV-1-mediated cell fusion, but the peptide's inability to inhibit HIV-2 medicated cell fusion in the same cell type at the concentrations tested provides further evidence for the high degree of selectivity associated with the antiviral action of DP178 (SEQ ID:1).

6.2.2. PEPTIDE INHIBITION OF INFECTION BY CELL-FREE VIRUS

DP178 (SEQ ID:1) was next tested for its ability to block CD-4$^+$ CEM cell infection by cell free HIV-1 virus. The results, shown in FIG. 2, are from an experiment in which DP178 (SEQ ID:1) was assayed for its ability to block infection of CEM cells by an HIV-1_{LAI} isolate. Included in the experiment were three control peptides, DP-116 (SEQ ID:9), DP-125 (SEQ ID:8), and DP-118 (SEQ ID:10). DP-116 (SEQ ID:9) represents a peptide previously shown to be inactive using this assay, and DP-125 (SEQ ID:8; Wild, C. et al., 1992, Proc. Natl. Acad, Sci. USA 89:10,537) and DP-118 (SEQ ID:10) are peptides which have previously been shown to be active in this assay. Each concentration (0, 0.04, 0.4, 4, and 40μg/ml) of peptide was incubated with 247 $TCID_{50}$ units of HIV-1_{LAI} virus and CEM cells. After 7 days of culture, cell-free supernatant was tested for the presence of RT activity as a measure of successful infection. The results, shown in FIG. 2, demonstrate that DP178 (SEQ ID:1) inhibited the de novo infection process mediated by the HIV-1 viral isolate at concentrations as low as 90ng/ml (IC50=90ng/ml). In contrast, the two positive control peptides, DP-125 (SEQ: ID:8) and DP-118 (SEQ ID:10), had over 60-fold higher IC50 concentrations of approximately 5μg/ml.

In a separate experiment, the HIV-1 and HIV-2 inhibitory action of DP178 (SEQ ID:1) was tested with CEM cells and either HIV-1_{LAI} or HIV-2_{NIHZ}. 62 $TCID_{50}$ HIV-1_{LAI} or 25 $GCID_{50}$ HIV-2_{NIHZ} were used in these experiments, and were incubated for 7 days. As may be seen in FIG. 3, DP178 (SEQ ID:1) inhibited HIV-1 infection with an IC50 of about 31ng/ml. In contrast, DP178 (SEQ ID:1) exhibited a much higher IC50 for HIV-2_{NIHZ}, thus making DP178 (SEQ ID:1) two logs more potent

as a HIV-1 inhibitor than a HIV-2 inhibitor. This finding is consistent with the results of the fusion inhibition assays described, above, in Section 6.2.1, and further supports a significant level of selectivity (i.e., for HIV-1 over HIV-2).

7. EXAMPLE: THE HIV-1 INHIBITOR, DP178 (SEQ ID:1) IS NON-CYTOTOXIC

In this Example, the 36 amino acid synthetic peptide inhibitor DP178 (SEQ ID:1) is shown to be non-cytotoxic to cells in culture, even at the highest peptide concentrations (40μg/ml) tested.

7.1. MATERIALS AND METHODS

Cell proliferation and toxicity assay: Approximately $3.8x10^5$ CEM cells for each peptide concentration were incubated for 3 days at 37°C in T25 flasks. Peptides tested were DP178 (SEQ ID:1) and DP-116 (SEQ ID:9), as described in FIG. 1. Peptides were synthesized as described, above, in Section 6.1. The concentrations of each peptide used were 0, 2.5, 10, and 40μg/ml. Cell counts were taken at incubation times of 0, 24, 48, and 72 hours.

7.2. RESULTS

Whether the potent HIV-1 inhibitor DP178 (SEQ ID:1) exhibited any cytotoxic effects was assessed by assaying the peptide's effects on the proliferation and viability of cells in culture. CEM cells were incubated in the presence of varying concentrations of DP178 (SEQ ID:1), and DP-116 (SEQ ID:9), a peptide previously shown to be ineffective as a HIV inhibitor (Wild, C. et al., 1992, Proc. Natl. Acad. Sci. USA 89:10,537-10,541). Additionally, cells were incubated in the absence of either peptide.

The results of the cytotoxicity study demonstrate that DP178 (SEQ ID:1) exhibits no cytotoxic effects on cells in culture. As can be seen, below, in Table XXIV, even the proliferation and viability characteristics of cells cultured for 3 days in the presence of the highest concentration of DP178 (SEQ ID:1) tested (40μg/ml) do not significantly differ from the DP-116 (SEQ ID:9) or the no-peptide controls. The cell proliferation data is also represented in graphic form in FIG. 6. As was demonstrated in the Working Example presented above in Section 6, DP178 (SEQ ID:1) completely inhibits HIV-1 mediated syncytia formation at peptide concentrations between 1 and 10ng/ml, and completely inhibits cell-free viral infection at concentrations of at least 90ng/ml. Thus, this study demonstrates that even at peptide concentrations greater than 3 log higher than the HIV inhibitory dose, DP178 (SEQ ID:1) exhibits no cytotoxic effects.

TABLE XXIV

Peptide	Peptide Concentration µg/ml	% Viability at time (hours) 0	24	48	72
DP178 (SEQ ID:1)	40	98	97	95	97
	10	98	97	98	98
	2.5	98	93	96	96
DP116 (SEQ ID:9)	40	98	95	98	97
	10	98	95	93	98
	2.5	98	96	98	99
No Peptide	0	98	97	99	98

8. EXAMPLE: THE INTERACTION OF DP178 AND DP107

Soluble recombinant forms of gp41 used in the example described below provide evidence that the DP178 peptide associates with a distal site on gp41 whose interactive structure is influenced by the DP107 leucine zipper motif. A single mutation disrupting the coiled-coil structure of the leucine zipper domain transformed the soluble recombinant gp41 protein from an inactive to an active inhibitor of HIV-1 fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107, determinant. The results also indicate that the anti-HIV activity of various gp41 derivatives (peptides and recombinant proteins) may be

due to their ability to form complexes with viral gp41 and interfere with its fusogenic process.

8.1. MATERIALS AND METHODS

8.1.1. CONSTRUCTION OF FUSION PROTEINS AND GP41 MUTANTS

Construction of fusion proteins and mutants shown in FIG. 7 was accomplished as follows: the DNA sequence corresponding to the extracellular domain of gp41 (540-686) was cloned into the Xmn I site of the expression vector pMal-p2 (New England Biolab) to give M41. The gp41 sequence was amplified from pgtat (Malim et al., 1988, Nature 355: 181-183) by using polymerase chain reaction (PCR) with upstream primer 5'-ATGACGCTGACGGTACAGGCC-3' (primer A) and downstream primer 5'-TGACTAAGCTTAATACCACAGCCAATTTGTTAT-3' (primer B). M41-P was constructed by using the T7-Gen in vitro mutagenesis kit from United States Biochemicals (USB) following the supplier's instructions. The mutagenic primer (5'-GGAGCTGCTTGGGGCCCCAGAC-3') introduces an Ile to Pro mutation in M41 at position 578. M41Δ107, from which the DP-107 region has been deleted, was made using a deletion mutagenic primer 5'-CCAAATCCCCAGGAGCTGCTCGAGCTGCACTATACCAGAC-3' (primer C) following the USB T7-Gen mutagenesis protocol. M41Δ178, from which the DP-178 region has been deleted, was made by cloning the DNA fragment corresponding to gp41 amino acids 540-642 into the Xmn I site of pMal-p2. Primer A and 5'-ATAGCTTCTAGATTAATTGTTAATTTCTCTGTCCC-3' (primer D) were used in the PCR with the template pgtat to generate the inserted DNA fragments. M41-P was used as the template with primer A and D in PCR to generate M41-PΔ178. All inserted sequences and mutated residues

were checked by restriction enzyme analysis and confirmed by DNA sequencing.

8.1.2. PURIFICATION AND CHARACTERIZATION OF FUSION PROTEINS

The fusion proteins were purified according to the protocol described in the manufacturer's brochure of protein fusion and purification systems from New England Biolabs (NEB). Fusion proteins (10 ng) were analyzed by electrophoresis on 8% SDS polyacrylamide gels. Western blotting analysis was performed as described by Sambrook et al., 1989, Molecular Cloning: A Laboratory Manual, 2d Ed, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, Ch. 18, pp. 64-75. An HIV-1 positive serum diluted 1000-fold, or a human Fab derived from repertoire cloning was used to react with the fusion proteins. The second antibody was HRP-conjugated goat antihuman Fab. An ECL Western blotting detection system (Amersham) was used to detect the bound antibody. A detailed protocol for this detection system was provided by the manufacturer. Rainbow molecular weight markers (Amersham) were used to estimate the size of fusion proteins.

8.1.3. CELL FUSION ASSAYS FOR ANTI-HIV ACTIVITY

Cell fusion assays were performed as previously described (Matthews et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5481). CEM cells (7 X 10^4) were incubated with HIV-1_{IIIB} chronically infected CEM cells (10^4) in 96-well flat-bottomed half-area plates (Costar) in 100 μl culture medium. Peptide and fusion proteins at various concentrations in 10 μl culture medium were incubated with the cell mixtures at 37°C for 24 hours. Multinucleated syncytia were estimated with microscopic examination. Both M41 and M41-P did

not show cytotoxicity at the concentrations tested and shown in FIG. 8.

Inhibition of HIV-1 induced cell-cell fusion activity was carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41-PΔ178 as indicated in FIG. 9. There was no observable syncytia in the presence of 10 nM DP178. No peptide or fusion protein was added in the control samples.

8.1.4. ELISA ANALYSIS OF DP178 BINDING TO THE LEUCINE ZIPPER MOTIF OF GP41

The amino acid sequence of DP178 used is: YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF. For enzyme linked immunoassay (ELISA), M41Δ178 or M41-PΔ178 (5 μg/ml) in 0.1M $NaHCO_3$, pH 8.6, were coated on 96 wells Linbro ELISA plates (Flow Lab, Inc.) overnight. Each well was washed three times with distilled water then blocked with 3% bovine serum albumin (BSA) for 2 hours. After blocking, peptides with 0.5% BSA in TBST (40 mM Tris-HCl pH7.5, 150 mM NaCl, 0.05% Tween 20) were added to the ELISA plates and incubated at room temperature for 1 hour. After washing three times with TBST, Fab-d was added at a concentration of 10 ng/ml with 0.5% BSA in TBST. The plates were washed three times with TBST after incubation at room temperature for 1 hour. Horse radish peroxidase (HRP) conjugated goat antihuman Fab antiserum at a 2000 fold dilution in TBST with 0.5% BSA was added to each well and incubated at room temperature for 45 minutes. The plates were then washed four times with TBST. The peroxidase substrate o-phenylene diamine (2.5 mg/ml) and 0.15% H_2O_2 were added to develop the color. The reaction was stopped with an equal volume of 4.5 N H_2SO_4 after incubation at room temperature for 10 minutes. The optical density of the stopped reaction mixture was measured with a micro plate reader

(Molecular Design) at 490 nm. Results are shown in FIG. 10.

8.2. RESULTS

8.2.1. THE EXPRESSION AND CHARACTERIZATION OF THE ECTODOMAIN OF gp41

As a step toward understanding the roles of the two helical regions in gp41 structure and function, the ectodomain of gp41 was expressed as a maltose binding fusion protein (M41) (FIG. 7). The fusogenic peptide sequence at the N-terminal of gp41 was omitted from this recombinant protein and its derivatives to improve solubility. The maltose binding protein facilitated purification of the fusion proteins under relatively mild, non-denaturing conditions. Because the M41 soluble recombinant gp41 was not glycosylated, lacked several regions of the transmembrane protein (i.e., the fusion peptide, the membrane spanning, and the cytoplasmic domains), and was expressed in the absence of gp120, it was not expected to precisely reflect the structure of native gp41 on HIV-1 virions. Nevertheless, purified M41 folded in a manner that preserved certain discontinuous epitopes as evidenced by reactivity with human monoclonal antibodies, 98-6, 126-6, and 50-69, previously shown to bind conformational epitopes on native gp41 expressed in eukaryotic cells (Xu et al., 1991, J. Virol. 65: 4832-4838; Chen, 1994, J. Virol. 68:2002-2010). Thus, at least certain regions of native gp41 defined by these antibodies appear to be reproduced in the recombinant fusion protein M41. Furthermore, M41 reacted with a human recombinant Fab (Fab-d) that recognizes a conformational epitope on gp41 and binds HIV-1 virions as well as HIV-1 infected cells but not uninfected cells as analyzed by FACS. Deletion of either helix motif, i.e., DP107 or DP178, of the M41 fusion protein

eliminated reactivity with Fab-d. These results indicate that both helical regions, separated by 60 amino acids in the primary sequence, are required to maintain the Fab-d epitope.

8.2.2. ANTI-HIV ACTIVITY OF THE RECOMBINANT ECTODOMAIN OF GP41

The wild type M41 fusion protein was tested for anti-HIV-1 activity. As explained, supra, synthetic peptides corresponding to the leucine zipper (DP107) and the C-terminal putative helix (DP178) show potent anti-HIV activity. Despite inclusion of both these regions, the recombinant M41 protein did not affect HIV-1 induced membrane fusion at concentrations as high as 50 μM (Table XXV, below).

TABLE XXV

DISRUPTION OF THE LEUCINE ZIPPER OF GP41 FREES THE ANTI-HIV MOTIF

	DP107	DP178	M41	M41-P	M41-PΔ178
Cell fusion (IC_{90})	1 μM	1 nM	>50 μM	83 nM	>50 μM
Fab-D binding (k_D)	-	-	$3.5x10^{-9}$	$2.5x10^{-8}$	-
HIV infectivity (IC_{90})	1 μM	80 nM	>16 μM	66 nM	>8 μM

1 The affinity constants of Fab-d binding to the fusion proteins were determined using a protocol described by B. Friguet et al., 1985, J. Immunol. Method. 77:305-319.

- = No detectable binding of Fab-d to the fusion proteins.

Antiviral Infectivity Assays. 20 μl of serially diluted virus stock was incubated for 60 minutes at ambient temperature with 20 μl of the indicated

concentration of purified recombinant fusion protein in RPMI 1640 containing 10% fetal bovine serum and antibiotics in a 96-well microtiter plate. 20 μl of CEM4 cells at 6 x 10^5 cells/ml were added to each well, and cultures were incubated at 37°C in a humidified CO_2 incubator. Cells were cultured for 9 days by the addition of fresh medium every 2 to 3 days. On days 5, 7, and 9 postinfection, supernatant samples were assayed for reverse transcriptase (RT) activity, as described below, to monitor viral replication. The 50% tissue culture infectious dose ($TCID_{50}$) was calculated for each condition according to the formula of Reed & Muench, 1937, Am. J. Hyg. 27:493-497. RT activity was determined by a modification of the published methods of Goff et al., 1981, J. Virol. 38:239-248 and Willey et al., 1988, J. Virol. 62:139-147 as described in Chen et al., 1993, AIDS Res. Human Retroviruses 9:1079-1086.

Surprisingly, a single amino acid substitution, proline in place of isoleucine in the middle of the leucine zipper motif, yielded a fusion protein (M41-P) which did exhibit antiviral activity (Table XXV and Fig. 8). As seen in Table XXV, M41-P blocked syncytia formation by 90% at approximately 85 nM and neutralized HIV-1_{IIIB} infection by 90% at approximately 70 nM concentrations. The anti-HIV-1 activity of M41-P appeared to be mediated by the C-terminal helical sequence since deletion of that region from M41-P yielded an inactive fusion protein, M41-PΔ178 (Table XXV). This interpretation was reinforced by experiments demonstrating that a truncated fusion protein lacking the DP178 sequence, M41Δ178, abrogated the potent anti-fusion activity of the DP178 peptide in a concentration-dependent manner (FIG. 9). The same truncated fusion protein containing the proline mutation disrupting the leucine zipper, M41-PΔ178, was not active in similar competition experiments (FIG. 9). The results indicate that the DP178 peptide associates with a second site on gp41 whose interactive structure is dependent on a wild type leucine zipper sequence. A similar interaction may occur within the wild type fusion protein, M41, and act to form an intramolecular clasp which sequesters

the DP178 region, making it unavailable for anti-viral activity.

A specific association between these two domains is also indicated by other human monoclonal Fab-d studies. For example, Fab-d failed to bind either the DP178 peptide or the fusion protein M41Δ178, but its epitope was reconstituted by simply mixing these two reagents together (FIG. 10). Again, the proline mutation in the leucine zipper domain of the fusion protein, M41-PΔ178, failed to reconstitute the epitope in similar mixing experiments.

9. EXAMPLE: METHOD FOR COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES

A number of known coiled-coil sequences have been well described in the literature and contain heptad repeat positioning for each amino acid. Coiled-coil nomenclature labels each of seven amino acids of a heptad repeat A through G, with amino acids A and D tending to be hydrophobic positions. Amino acids E and G tend to be charged. These four positions (A, D, E, and G) form the amphipathic backbone structure of a monomeric alpha-helix. The backbones of two or more amphipathic helices interact with each other to form di-, tri-, tetrameric, etc., coiled-coil structures. In order to begin to design computer search motifs, a series of well characterized coiled coils were chosen including yeast transcription factor GCN4, Influenza Virus hemagglutinin loop 36, and human proto-oncogenes c-Myc, c-Fos, and c-Jun. For each peptide sequence, a strict homology for the A and D positions, and a list of the amino acids which could be excluded for the B, C, E, F, and G positions (because they are not observed in these positions) was determined. Motifs were tailored to the DP107 and DP178 sequences by

deducing the most likely possibilities for heptad positioning of the amino acids of HIV-1 Bru DP-107, which is known to have coiled-coil structure, and HIV-1 Bru DP178, which is still structurally undefined. The analysis of each of the sequences is contained in FIG. 12. For example, the motif for GCN4 was designed as follows:

1. The only amino acids (using standard single letter amino acid codes) found in the A or D positions of GCN4 were [LMNV].
2. All amino acids were found at B, C, E, F, and G positions except {CFGIMPTW}.
3. The PESEARCH motif would, therefore, be written as follows:

[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)-
[LMNV]-{CFGIMPTW}(2)-[LMNV]-{CFGIMPTW}(3)

Translating or reading the motif: "at the first A position either L, M, N, or V must occur; at positions B and C (the next two positions) accept everything except C, F, G, I, M, P, T, or W; at the D position either L, M, N, or V must occur; at positions E, F, and G (the next 3 positions) accept everything except C, F, G, I, M, P, T, or W." This statement is contained four times in a 28-mer motif and five times in a 35-mer motif. The basic motif key then would be: [LMNV]-{CFGIMPTW}. The motif keys for the remaining well described coiled-coil sequences are summarized in FIG. 12.

The motif design for DP107 and DP178 was slightly different than the 28-mer model sequences described above due to the fact that heptad repeat positions are not defined and the peptides are both longer than 28 residues. FIG. 13 illustrates several possible

sequence alignments for both DP107 and DP178 and also includes motif designs based on 28-mer, 35-mer, and full-length peptides. Notice that only slight differences occur in the motifs as the peptides are lengthened. Generally, lengthening the base peptide results in a less stringent motif. This is very useful in broadening the possibilities for identifying DP107-or DP-178-like primary amino acid sequences referred to in this document as "hits".

In addition to making highly specific motifs for each type peptide sequence to be searched, it is also possible to make "hybrid" motifs. These motifs are made by "crossing" two or more very stringent motifs to make a new search algorithm which will find not only both "parent" motif sequences but also any peptide sequences which have similarities to one, the other, or both "parents". For example, in FIG. 14 the "parent" sequence of GCN4 is crossed with each of the possible "parent" motifs of DP-107. Now the hybrid motif must contain all of the amino acids found in the A and D positions of both parents, and exclude all of the amino acids not found in either parent at the other positions. The resulting hybrid from crossing GCN4 or [LMNV]{CFGIMPTW} and DP107 (28-mer with the first L in the D position) or [ILQT]{CDFIMPST}, is [ILMNQTV]{CFIMPT}. Notice that now only two basic hybrid motifs exist which cover both framing possibilities, as well as all peptide lengths of the parent DP-107 molecule. FIG. 15 represents the "hybridizations" of GCN4 with DP-178. FIG. 16 represents the "hybridizations" of DP107 and DP178. It is important to keep in mind that the represented motifs, both parent and hybrid, are motif keys and not the depiction of the full-length motif needed to actually do the computer search.

Hybridizations can be performed on any combination of two or more motifs. FIG. 17 summarizes several three-motif hybridizations including GCN4, DP107 (both frames), and DP178 (also both frames). Notice that the resulting motifs are now becoming much more similar to each other. In fact, the first and third hybrid motifs are actually subsets of the second and fourth hybrid motifs respectively. This means that the first and third hybrid motifs are slightly more stringent than the second and fourth. It should also be noted that with only minor changes in these four motifs, or by hybridizing them, a single motif could be obtained which would find all of the sequences. However, it should be remembered that stringency is also reduced. Finally, the most broad-spectrum and least-stringent hybrid motif is described in FIG. 18 which summarizes the hybridization of GCN4, DP107 (both frames), DP178 (both frames), c-Fos, c-Jun, c-Myc, and Flu loop 36.

A special set of motifs was designed based on the fact that DP-178 is located only approximately ten amino acids upstream of the transmembrane spanning region of gp41 and just C-terminal to a proline which separates DP107 and DP178. It has been postulated that DP178 may be an amphipathic helix when membrane associated, and that the proline might aid in the initiation of the helix formation. The same arrangement was observed in Respiratory Syncytial Virus; however, the DP178-like region in this virus also had a leucine zipper just C-terminal to the proline. Therefore, N-terminal proline-leucine zipper motifs were designed to analyze whether any other viruses might contain this same pattern. The motifs are summarized in FIG. 19.

The PC/Gene protein database contains 5879 viral amino acid sequences (library file PVIRUSES; CD-ROM

release 11.0). Of these, 1092 are viral enveloped or glycoprotein sequences (library file PVIRUSE1). Tables V through XIV contain lists of protein sequence names and motif hit locations for all the motifs searched.

10. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107 AND DP178-LIKE SEQUENCES IN HUMAN IMMUNODEFICIENCY VIRUS

FIG. 20 represents search results for HIV-1 BRU isolate gp41 (PC/Gene protein sequence PENV_HV1BR). Notice that the hybrid motif which crosses DP-107 and DP-178 (named 107x178x4; the same motif as found in FIG. 16 found three hits including amino acids 550-599, 636-688, and 796-823. These areas include DP-107 plus eight N-terminal and four C-terminal amino acids; DP178 plus seven N-terminal and ten C-terminal amino acids; and an area inside the transmembrane region (cytoplasmic). FIG. 20 also contains the results obtained from searching with the motif named ALLMOTI5, for which the key is found in FIG. 17 ({CDGHP}{CFP}x5). This motif also found three hits including DP107 (amino acids 510-599), DP178 (615-717), and a cytoplasmic region (772-841). These hits overlap the hits found by the motif 107x178x4 with considerable additional sequences on both the amino and carboxy termini. This is not surprising in that 107x178x4 is a subset of the ALLMOTI5 hybrid motif. Importantly, even though the stringency of ALLMOTI5 is considerably less than 107x178x4, it still selectively identifies the DP107 and DP178 regions of gp41 shown to contain sequences for inhibitory peptides of HIV-1. The results of these two motif searches are summarized in Table V under the PC/Gene protein sequence name PENV HV1BR. The proline-leucine zipper motifs also gave several hits in HIV-1 BRU including 503-525 which is

at the very C-terminus of gp120, just upstream of the cleavage site (P7LZIPC and P12LZIPC); and 735-768 in the cytoplasmic domain of gp41 (P23LZIPC). These results are found in Tables VIII, IX, and X under the same sequence name as mentioned above. Notice that the only area of HIV-1 BRU which is predicted by the Lupas algorithm to contain a coiled-coil region, is from amino acids 635-670. This begins eight amino acids N-terminal to the start and ends eight amino acids N-terminal to the end of DP178. DP107, despite the fact that it is a known coiled coil, is not predicted to contain a coiled-coil region using the Lupas method.

11. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN RESPIRATORY SYNCYTIAL VIRUS

FIG. 21 represents search results for Human Respiratory Syncytial Virus (RSV; Strain A2) fusion glycoprotein F1 (PC/Gene protein sequence name PVGLF_HRSVA). Motif 107x178x4 finds three hits including amino acids 152-202, 213-243, and 488-515. The arrangement of these hits is similar to what is found in HIV-1 except that the motif finds two regions with similarities to DP-178, one just downstream of what would be called the DP107 region or amino acids 213-243, and one just upstream of the transmembrane region (also similar to DP178) or amino acids 488-515. Motif ALLMOTI5 also finds three areas including amino acids 116-202, 267-302, and 506-549. The proline-leucine zipper motifs also gave several hits including amino acids 205-221 and 265-287 (P1LZIPC 265-280, P12LZIPC), and 484-513 (P7LZIPC and P12LZIPC 484-506, P23LZIPC). Notice that the PLZIP motifs also identify regions which share location similarities with DP-178 of HIV-1.

12. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN SIMIAN IMMUNODEFICIENCY VIRUS

Motif hits for Simian immunodeficiency Virus gp41 (AGM3 isolate; PC/Gene protein sequence name PENV_SIVAG) are shown in FIG. 22. Motif 107x178x4 finds three hits including amino acids 566-593, 597-624, and 703-730. The first two hits only have three amino acids between them and could probably be combined into one hit from 566-624 which would represent a DP107-like hit. Amino acids 703 to 730 would then represent a DP178-like hit. ALLMOTI5 also finds three hits including amino acids 556-628 (DP107-like), 651-699 (DP178-like), and 808-852 which represents the transmembrane spanning region. SIV also has one region from 655-692 with a high propensity to form a coiled coil as predicted by the Lupas algorithm. Both 107x178x4 and ALLMOTI5 motifs find the same region. SIV does not have any PLZIP motif hits in gp41.

The identification of DP178/DP107 analogs for a second SIV isolate (MM251) is demonstrated in the Example presented, below, in Section 19.

13. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178 LIKE SEQUENCES IN CANINE DISTEMPER VIRUS

Canine Distemper Virus (strain Onderstepoort) fusion glycoprotein F1 (PC/Gene Protein sequence name PVGLF_CDVO) has regions similar to Human RSV which are predicted to be DP107-like and DP178-like (FIG. 23). Motif 107x178x4 highlights one area just C-terminal to the fusion peptide at amino acids 252-293. Amino acids 252-286 are also predicted to be coiled coil using the Lupas algorithm. Almost 100 amino acids C-terminal to the first region is a DP178-like area at residues 340-367. ALLMOTI5 highlights three areas of

interest including: amino acids 228-297, which completely overlaps both the Lupas prediction and the DP107-like 107x178x4 hit; residues 340-381, which overlaps the second 107x178x4 hit; and amino acids 568-602, which is DP178-like in that it is located just N-terminal to the transmembrane region. It also overlaps another region (residues 570-602) predicted by the Lupas method to have a high propensity to form a coiled coil. Several PLZIP motifs successfully identified areas of interest including P6 and P12LZIPC which highlight residues 336-357 and 336-361 respectively; P1 and P12LZIPC which find residues 398-414; and P12 and P23LZIPC which find residues 562-589 and 562-592 respectively.

14. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN NEWCASTLE DISEASE VIRUS

FIG. 24 shows the motif hits found in Newcastle Disease Virus (strain Australia-Victoria/32; PC Gene protein sequence name PVGLF_NDVA). Motif 107x178x4 finds two areas including a DP107-like hit at amino acids 151-178 and a DP178-like hit at residues 426-512. ALLMOTI5 finds three areas including residues 117-182, 231-272, and 426-512. The hits from 426-512 include a region which is predicted by the Lupas method to have a high coiled-coil propensity (460-503). The PLZIP motifs identify only one region of interest at amino acids 273-289 (P1 and 12LZIPC).

15. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN PARAINFLUENZA VIRUS

Both motifs 107x178x4 and ALLMOTI5 exhibit DP107-like hits in the same region, 115-182 and 117-182 respectively, of Human Parainfluenza Virus (strain NIH 47885; PC/Gene protein sequence name PVGLF_p13H4;

(FIG. 25). In addition, the two motifs have a DP178-like hit just slightly C-terminal at amino acids 207-241. Both motifs also have DP178-like hits nearer the transmembrane region including amino acids 457-497 and 462-512 respectively. Several PLZIP motif hits are also observed including 283-303 (P5LZIPC), 283-310 (P12LZIPC), 453-474 (P6LZIPC), and 453-481 (P23LZIPC). The Lupas algorithm predicts that amino acids 122-176 may have a propensity to form a coiled-coil.

16. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES OF INFLUENZA A VIRUS

FIG. 26 illustrates the Lupas prediction for a coiled coil in Influenza A Virus (strain A/Aichi/2/68) at residues 379-436, as well as the motif hits for 107x178x4 at amino acids 387-453, and for ALLMOTI5 at residues 380-456. Residues 383-471 (38-125 of HA2) were shown by Carr and Kim to be an extended coiled coil when under acidic pH (Carr and Kim, 1993, Cell 73: 823-832). The Lupas algorithm predicts a coiled-coil at residues 379-436. All three methods successfully predicted the region shown to actually have coiled-coil structure; however, ALLMOTI5 predicted the greatest portion of the 88 residue stretch.

17. EXAMPLE: POTENTIAL RESPIRATORY SYNCYTIAL VIRUS DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, respiratory syncytial virus (RSV) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 11, above, were tested for anti-RSV activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated

that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

17.1 MATERIALS AND METHODS

Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptides were synthesized according to the methods described, above, in Section 6.1. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-RSV antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of HEp2 cells acutely infected with RSV (i.e., cells which are infected with a multiplicity of infection of greater than 2) to fuse and cause syncytial formation on a monolayer of uninfected an uninfected line of Hep-2 cells. The lower the observed level of fusion, the greater the antiviral activity of the peptide was determined to be.

Uninfected confluent monolayers of Hep-2 cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics (penicillin/streptomycin; Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

To prepare Hep2 cells for addition to uninfected cells, cultures of acutely infected Hep2 cells were

washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected Hep-2 cells.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Hep-2 cells, then adding peptides (at the dilutions described below) in 3% EMEM, and 100 acutely RSV-infected Hep2 cells per well. Wells were then incubated at 37°C for 48 hours.

After incubation, cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of either Crystal Violet stain or XTT. With respect to Crystal Violet, approximately 50μl 0.25% Crystal Violet stain in methanol were added to each well. The wells were rinsed immediately, to remove excess stain, and were allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

With respect to XTT (2,3-bis[2-Methoxy-4-nitro-5-sulfophenyl]-2H-tetrazolium-5-carboxyanilide inner salt), 50μl XTT (1mg/ml in RPMI buffered with 100mM HEPES, pH 7.2-7.4, plus 5% DMSO) were added to each well. The $OD_{450/690}$ was measured (after blanking against growth medium without cells or reagents, and against reagents) according to standard procedures.

Peptides: The peptides characterized in the study presented herein were:

1) peptides T-142 to T-155 and T-575, as shown in FIG. 27A-B, and peptides T-22 to T-27, T-68, T-334 and T-371 to T-375 and T-575, as shown in FIG. 27C;

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2) peptides T-120 to T-141 and T-576, as shown in FIG. 27D-E, and peptides T-12, T-13, T-15, T-19, T-28 to T-30, T-66, T-69, T-70 and T-576, as shown in FIG. 27F; and

3) peptides T-67 and T-104 to T-119 and T-384, as shown in FIG. 28A-B, and peptides T-71, T-613 to T-617, T-662 to T-676 and T-730, as shown in FIG. 28C.

The peptides of group 1 represent portions of the RSV F2 protein DP178/107-like region. The peptides of group 2 represent portions of the RSV F1 protein DP107-like region. The peptides of groups 3 represent portions of the RSV F1 protein DP178-like region.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used. The IC_{50} data for each peptide represents the average of several experiments conducted utilizing that peptide.

17.2 RESULTS

The data summarized in FIGS. 27A-F and 28A-C represent antiviral and structural information obtained from peptides derived from the RSV F2 DP178/DP107-like F2 region (FIG. 27A-C), the RSV F1 DP-107-like region (FIG. 27D-F) and the RSV DP178-like F2 region (FIG. 28A-C).

As shown in FIGS. 27A-F, a number of the RSV DP178/DP107-like peptides exhibited a detectable level of antiviral activity. Peptides from the RSV DP178/DP107-like F2 region (FIG. 27A-C), for example, T-142 to T-145 and T-334 purfied peptides, exhibited detectable levels of antiviral activity, as evidenced by their IC_{50} values. Further, a number of RSV F1 DP107-like peptides (FIG. 27D-F) exhibited a sizable level of antiviral activity as purified peptides, including, for example, peptides T-124 to T-127, T-

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131, T-135 and T-137 to T-139, as demonstrated by their low IC_{50} values. In addition, CD analysis FIG. 27A-B, 27D-E) reveals that many of the peptides exhibit some detectable level of helical structure.

The results summarized in FIG. 28A-C demonstrate that a number of DP178-like purified peptides exhibit a range of potent anti-viral activity. These peptides include, for example, T-67, T-104, T-105 and T-107 to T-119, as listed in FIG. 28A-B, and T-665 to T-669 and T-671 to T-673, as listed in FIG. 28C. In addition, some of the DP178-like peptides exhibited some level of helicity.

Thus, the computer assisted searches described, hereinabove, successfully identified viral peptide domains that represent highly promising anti-RSV antiviral compounds.

18. EXAMPLE: POTENTIAL HUMAN PARAINFLUENZA VIRUS TYPE 3 DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, human parainfluenza virus type 3 (HPIV3) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 15, above, were tested for anti-HPIV3 activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

18.1 MATERIALS AND METHODS

Structural analyses: Structural analyses consisted of circular dichroism (CD) studies. The CD

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spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-HPIV3 antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of Hep2 cells chronically infected with HPIV3 to fuse and cause syncytial formation on a monolayer of an uninfected line of CV-1W cells. The more potent the lower the observed level of fusion, the greater the antiviral activity of the peptide.

Uninfected confluent monolayers of CV-1W cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics/antimycotics (Gibco BRL Life Technologies Cat. No. 15040-017) added at 1%, and glutamine added at 1%.

To prepare Hep2 cells for addition to uninfected cells, cultures of chronically infected Hep2 cells were washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected CV-1W cells.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected CV-1W cells, then adding peptides (at the

dilutions described below) in 3% EMEM, and 500 chronically HPIV3-infected Hep2 cells per well. Wells were then incubated at 37°C for 24 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50µl 0.25% Crystal Violet stain in methanol. Wells were rinsed immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Alternatively, instead of Crystal Violet analysis, cells were assayed with XTT, as described, avove, in Section 17.1.

Peptides: The peptides characterized in the study presented herein were:

1) Peptides 157 to 188, as shown in FIG. 29A-C, and peptides T-38 to T-40, T-42 to T-46 and T-582, as shown in FIG. 29D-E. These peptides are derived from the DP107 region of the HPIV3 F1 fusion protein (represented by HPF3 107, as shown in FIG. 29A-C); and

2) Peptides 189 to 210, as shown in FIG. 30A-B, and T-269, T-626, T-383 and T-577 to T-579, as shown in FIG. 30C. These peptides are primarily derived from the DP178 region of the HPIV3 F1 fusion protein (represented by HPF3 178, as shown in FIG. 30A-B). Peptide T-626 contains two mutated amino acid resides (represented by a shaded background). Additionally, peptide T-577 represents F1 amino acids 65-100, T-578 represents F1 amino acids 207-242 and T-579 represents F1 amino acids 273-309.

Each peptide was tested at 2-fold serial dilutions ranging from 500µg/ml to approximately

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500ng/ml. For each of the assays, a well containing no peptide was also used.

18.2 RESULTS

The data summarized in FIGS. 29A-C and 30A-C represent antiviral and structural information obtained from peptides derived from the HPIV3 fusion protein DP107-like region (FIG. 29A-C) and the HPIV3 fusion protein DP178-like region (FIG. 30A-C).

As shown in FIG. 29A-C, a number of the HPIV3 DP107-like peptides exhibited potent levels of antiviral activity. These peptides include, for example, peptides T-40, T-172 to T-175, T-178, T-184 and T-185.

The results summarized in FIG. 30A-C demonstrate that a number of the DP178-like peptides tested exhibit a range of anti-viral activity. These peptides include, for example, peptides 194 to 211, as evidenced by their low IC_{50} values. In fact, peptides 201 to 205 exhibit IC_{50} values in the nanogram/ml range. In addition, many of the DP178-like peptides exhibited some level of helicity.

Thus, the computer assisted searches described, hereinabove, have successfully identified viral peptide domains that represent highly promising anti-HPIV3 antiviral compounds.

19. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN IMMUNODEFICIENCY VIRUS

FIG. 31 represents search results for SIV isolate MM251 (PC/Gene® protein sequence PENV_SIVM2). Both 107x178x4 and ALLMOTI5 search motifs identified two regions with similarities to DP107 and/or DP178.

The peptide regions found by 107x178x4 were located at amino acid residues 156-215 and 277-289. The peptide regions found by ALLMOTI5 were located at

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amino acid residues 156-219 and 245-286. Both motifs, therefore, identify similar regions.

Interestingly, the first SIV peptide region (i.e., from amino acid residue 156 to approximately amino acid residue 219) correlates with a DP107 region, while the second region identified (i.e., from approximately amino acid residue 245 to approximately amino acid residue 289) correlates with the DP178 region of HIV. In fact, an alignment of SIV isolate MM251 and HIV isolate BRU, followed by a selection of the best peptide matches for HIV DP107 and DP178, reveals that the best matches are found within the peptide regions identified by the 107x178x4 and ALLMOTI5 search motifs.

It should be noted that a potential coiled-coil region at amino acid residues 242-282 is predicted by the Lupas program. This is similar to the observation in HIV in which the coiled-coil is predicted by the Lupas program to be in the DP178 rather than in the DP107 region. It is possible, therefore, that SIV may be similar to HIV in that it may contain a coiled-coil structure in the DP107 region, despite such a structure being missed by the Lupas algorithm. Likewise, it may be that the region corresponding to a DP178 analog in SIV may exhibit an undefined structure, despite the Lupas program's prediction of a coiled-coil structure.

20. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN EPSTEIN-BARR VIRUS

The results presented herein describe the identification of DP178/DP107 analogs within two different Epstein-Barr Virus proteins. Epstein-Barr is a human herpes virus which is the causative agent of, for example, infectious mononucleosis (IM), and is also associated with nasopharyngeal carcinomas (NPC), Burkitt's lymphoma and other diseases. The virus predominantly exists in the latent form and is activated by a variety of stimuli.

FIG. 32 depicts the search motif results for the Epstein-Barr Virus (Strain B95-8; PC/Gene® protein sequence PVGLB_EBV) glycoprotein gp110 precursor (gp115). The 107x178x4 motif identified two regions of interest, namely the regions covered by amino acid residues 95-122 and 631-658. One PZIP region was identified at amino acid residue 732-752 which is most likely a cytoplasmic region of the protein. The Lupas algorithm predicts a coiled-coil structure for amino acids 657-684. No ALLMOTI5 regions were identified.

FIG. 33 depicts the search motif results for the Zebra (or EB1) trans-activator protein (BZLF1) of the above-identified Epstein-Barr virus. This protein is a transcription factor which represents the primary mediator of viral reactivation. It is a member of the b-ZIP family of transcription factors and shares significant homology with the basic DNA-binding and dimerization domains of the cellular oncogenes c-fos and C/EBP. The Zebra protein functions as a homodimer.

Search results domonstrate that the Zebra protein exhibits a single region which is predicted to be either of DP107 or DP178 similarity, and is found between the known DNA binding and dimerization regions of the protein. Specifically, this region is located

at amino acid residues 193-220, as shown in FIG. 33. The Lupas program predicted no coiled-coil regions.

21. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN MEASLES VIRUS

FIG. 34 illustrates the motif search results for the fusion protein F1 of measles virus, strain Edmonston (PC Gene® protein sequence PVGLF_MEASE), successfully identifying DP178/DP107 analogs.

The 107x178x4 motif identifies a single region at amino acid residues 228-262. The ALLMOTI5 search motif identifies three regions, including amino acid residues 116-184, 228-269 and 452-500. Three regions containing proline residues followed by a leucine zipper-like sequence were found beginning at proline residues 214, 286 and 451.

The Lupas program identified two regions it predicted had potential for coiled-coil structure, which include amino acid residues 141-172 and 444-483.

22. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN HEPATITIS B VIRUS

FIG. 35 depicts the results of a PZIP motif search conducted on the Hepatitis B virus subtype AYW. Two regions of interest within the major surface antigen precursor S protein were identified. The first lies just C-terminal to the proposed fusion peptide of the major surface antigen (Hbs) which is found at amino acid residues 174-191. The second region is located at amino acid residues 233-267. The Lupas program predicts no coiled-coil repeat regions.

In order to test the potential anti-HBV antiviral activity of these D178/DP107 analog regions, peptides derived from area around the analog regions are synthesized, as shown in FIG. 52A-B. These peptides represent one amino acid peptide "walks" through the

putative DP178/DP107 analog regions. The peptides are synthesized according to standard Fmoc chemistry on Rinkamide MBHA resins to provide for carboxy terminal blockade (Chang, C.D. and Meinhofer, J., 1978, Int. J. Pept. Protein Res. 11:246-249; Fields, G.B. and Noble, R.L., 1990, Int. J. Pept. Protein Res. 35:161-214). Follwing complete synthesis, the peptide amino-terminus is blocked through automated acetylation and the peptide is cleaved with trifluoroacetic acid (TFA) and the appropriate scavengers (King, D.S. et al., 1990, Int. J. Pept. Res. 36:255-266). After cleavage, the peptide is precipitated with ether and dried under vacuum for 24 hours.

The anti-HBV activity of the peptides is tested by utilizing standard assays to determine the test peptide concentration required to cause an acceptable (e.g., 90%) decrease in the amount of viral progeny formed by cells exposed to an HBV viral inoculum. Candidate antivial peptides are further characterized in model systems such as wood chuck tissue culture and animal sytems, prior to testing on humans.

23. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN MASON-PFIZER MONKEY VIRUS

The results depicted herein illustrate the results of search motifs conducted on the Simian Mason-Pfizer monkey virus. The motifs reveal DP178/DP107 analogs within the enveloped (TM) protein GP20, as shown in FIG. 36.

The 107x178x4 motifs identifies a region at amino acid residues 422-470. The ALLMOTI5 finds a region at amino acid residues 408-474. The Lupas program predicted a coiled-coil structure a amino acids 424-459.

24. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN BACTERIAL PROTEINS

The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to sequences present in proteins of a variety of bacterial species.

FIG. 37 depicts the search motif results for the Pseudomonas aeruginosa fimbrial protein (Pilin). Two regions were identified by motifs 107x178x4 and ALLMOTI5. The regions located at amino acid residues 30-67 and 80-144 were identified by the 107x178x4 motif. The regions at amino acid residues 30-68 and 80-125 were identified by the ALLMOTI5.

FIG. 38 depicts the search motif results for the Pseudomonas gonorrhoeae fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 66-97 was identified by the 107x178x4 motif. The region located at amino acid residues 66-125 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 39 depicts the search motif results for the Hemophilus Influenza fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 40 depicts the search motif results for the Staphylococcus aureus toxic shock syndrome Hemophilus Influenza fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The

region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 41 summarizes the motif search results conducted on the Staphylococcus aureus enterotoxin Type E protein. These results demonstrate the successful identification of DP178/DP107 analogs corresponding to peptide sequences within this protein, as described below.

The ALLMOTI5 motif identified a region at amino acid residues 22-27. The 107x178x4 motif identified two regions, with the first at amino acid residues 26-69 and the second at 88-115. A P12LZIPC motif search identified two regions, at amino acid residues 163-181 and 230-250.

The Lupas program predicted a region with a high propensity for coiling at amino acid residues 25-54. This sequence is completely contained within the first region identified by both ALLMOTI5 and 107x178x4 motifs.

FIG. 42 depicts the search motif results conducted on a second Staphylococcus aureus toxin, enterotoxin A. Two regions were identified by the ALLMOTI5 motif, at amino acid residues 22-70 and amino acid residues 164-205. The 107x178x4 motif found two regions, the first at amino acid residues 26-69 and the second at amino acid residues 165-192. A P23LZIPC motif search revealed a region at amino acid residues 216-250. No coiled-coil regions were predicted by the Lupas program.

FIG. 43 shows the motif search results conducted on the E. coli heat labile enterotoxin A protein, demonstrating that identification of DP178/DP107 analogs corresponding to peptides located within this protein. Two regions were identified by the ALLMOTI5 motif, with the first residing at amino acid residues

55-115, and the second residing at amino acid residues 216-254. The 107x178x4 motif identified a single region at amino acid residues 78-105. No coiled-coil regions were predicted by the Lupas program.

25. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS WITHIN VARIOUS HUMAN PROTEINS

The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to peptide sequences present within several different human proteins.

FIG. 44 illustrates the search motif results conducted on the human c-fos oncoprotein. The ALLMOTI5 motif identified a single region at amino acid residues 155-193. The 107x178x4 motif identified one region at amino acid residues 162-193. The Lupas program predicted a region at amino acid residues 148-201 to have coiled-coil structure.

FIG. 45 illustrates the search motif results conducted on the human lupus KU autoantigen protein P70. The ALLMOTI5 motif identified a single region at amino acid residues 229-280. The 107x178x4 motif identified one region at amino acid residues 235-292. The Lupas program predicted a region at amino acid residues 232-267 to have coiled-coil structure.

FIG. 46 illustrates the search motif results conducted on the human zinc finger protein 10. The ALLMOTI5 motif identified a single region at amino acid residues 29-81. The 107x178x4 motif identified one region at amino acid residues 29-56. A P23LZIPC motif search found a single region at amino acid residues 420-457. The Lupas program predicted no coiled-coil regions.

26. EXAMPLE: POTENTIAL MEASLES VIRUS DP178/DP107 ANALOGS: CD AND ANTIVIRAL CHARACTERIZATION

In the Example presented herein, measles (MeV) virus DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 21, above, are tested for anti-MeV activity. Additionally, circular dichroism (CD) structural analyses are conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that none of the these peptides exhibit a substantial helical character.

26.1 MATERIALS AND METHODS

Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

Anti-MeV antiviral activity syncytial reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of Vero cells acutely infected with MeV (i.e., cells which are infected with a multiplicity of infection of 2-3) to fuse and cause syncytial formation on a monolayer of an uninfected line of Vero cells. The more potent the peptide, the lower the observed level of fusion, the greater the antiviral activity of the peptide.

Uninfected confluent monolayers of Vero cells were grown in microtiter wells in 10% FBS EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum

[FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 10%, antibiotics/antimycotics (Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

To prepare acutely infected Vero cells for addition to the uninfected cells, cultures of acutely infected Vero cells were washed twice with HBSS (Bio Whittaker Cat. No. 10-543F) and cell monolayers were removed with trypsin (Bio Whittaker Cat. No. 17-161E). Once cells detached, media was added, any remaining clumps of cells were dispersed, and hemacytometer cell counts were performed.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and 50-100 acutely MeV-infected Vero cells per well. Wells were then incubated at 37°C for a maximum of 18 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50μl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Anti-MeV antiviral activity plaque reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of MeV to infect permissive, uninfected Vero cells, leading to the infected cells' fusing with uninfected cells to produce syncytia. The lower the observed level of syncytial formation, the greater the antiviral activity of the peptide.

Monolayers of uninfected Vero cells are grown as described above.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and MeV stock virus at a final concentration of 30 plaque forming units (PFU) per well. Wells were then incubated at 37°C for a minimum of 36 hours and a maximum of 48 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50μl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Peptides: The peptides characterized in the study presented herein were peptides T-252A0 to T-256A0, T-257B1/C1, and T-258B1 to T-265B0, and T-266A0 to T-268A0, as shown in FIG. 47. These peptides represent a walk through the DP178-like region of the MeV fusion protein.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

26.2 RESULTS

The data summarized in FIG. 47 represents antiviral and structural information obtained via "peptide walks" through the DP178-like region of the MeV fusion protein.

As shown in FIG. 47, the MeV DP178-like peptides exhibited a range of antiviral activity as crude peptides. Several of these peptides were chosen for purification and further antiviral characterization.

The IC_{50} values for such peptides were determined, as shown in FIG. 47, and ranged from 1.35μg/ml (T-257B1/C1) to 0.072μg/ml (T-265B1). None of the DP178-like peptides showed, by CD analysis, a detectable level of helicity.

Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-MeV antiviral compounds.

27. EXAMPLE: POTENTIAL SIV DP178/DP107 ANALOGS: ANTIVIRAL CHARACTERIZATION

In the Example presented herein, simian immunodeficiency virus (SIV) DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9, 12 and 19, above, were tested for anti-SIV activity. It is demonstrated that several of the identified peptides exhibit potent antiviral capability.

27.1 MATERIALS AND METHODS

Anti-SIV antiviral assays: The assay utilized herein were as reported in Langolis et al. (Langolis, A.J. et al., 1991, AIDS Research and Human Retroviruses 7:713-720).

Peptides: The peptides characterized in the study presented herein were peptides T-391 to T-400, as shown in FIG. 48. These peptides represent a walk through the DP178-like region of the SIV TM protein.

Each peptide was tested at 2-fold serial dilutions ranging from 100μg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

27.2 RESULTS

The data summarized in FIG. 48 represents antiviral information obtained via "peptide walks" through the DP178-like region of the SIV TM protein.

As shown in FIG. 48, peptides T-391 to T-400 were tested and exhibited a potent antiviral activity as crude peptides.

Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-SIV antiviral compounds.

28. EXAMPLE: ANTI-VIRAL ACTIVITY OF DP107 AND DP-178 PEPTIDE TRUNCATIONS AND MUTATIONS

The Example presented in this Section represents a study of the antiviral activity of DP107 and DP178 truncations and mutations. It is demonstrated that several of these DP107 and DP178 modified peptides exhibit substantial antiviral activity.

28.1 MATERIALS AND METHODS

Anti-HIV assays: The antiviral assays performed were as those described, above, in Section 6.1. Assays utilized HIV-1/IIIb and/or HIV-2 NIHZ isolates. Purified peptides were used, unless otherwise noted in FIGS. 49A-C.

Peptides: The peptides characterized in the study presented herein were:

1) FIGS. 49A-C present peptides derived from the region around and containing the DP178 region of the HIV-1 BRU isolate. Specifically, this region spanned from gp41 amino acid residue 615 to amino acid residue 717. The peptides listed contain truncations of this region and/or mutations

which vary from the DP178 sequence amino acid sequence. Further, certain of the peptides have had amino- and/or carboxy-terminal groups either added or removed, as indicated in the figures; and

2) FIG. 50. presents peptides which represent truncations of DP107 and/or the gp41 region surrounding the DP107 amino acid sequence of HIV-1 BRU isolate. Certain of the peptides are unblocked or biotinylated, as indicated in the figure.

Blocked peptides contained an acyl N-terminus and an amido C-terminus.

28.2 RESULTS

Anti-HIV antiviral data was obtained with the group 1 DP178-derived peptides listed in FIG. 49A-C. The full-length, non-mutant DP178 peptide (referred to in FIG. 49A-C as T20) results shown are for 4ng/ml.

In FIG. 49A, a number of the DP178 truncations exhibited a high level of antiviral activity, as evidenced by their low IC_{50} values. These include, for example, test peptides T-50, T-624, T-636 to T-641, T-645 to T-650, T-652 to T-654 and T-656. T-50 represents a test peptide which contains a point mutation, as indicated by the residue's shaded background. The HIV-1-derived test peptides exhibited a distinct strain-specific antiviral activity, in that none of the peptides tested on the HIV-2 NIHZ isolate demonstrated appreciable antti-HIV-2 antiviral activity.

Among the peptides listed in FIG. 49B, are test peptides representing the amino (T-4) and carboxy (T-3) terminal halves of DP178 were tested. The amino terminal peptide was not active (IC_{50}>400μg/ml) whereas the carboxy terminal peptide showed potent antiviral

activity (IC_{50}= 3μg/ml). A number of additional test peptides also exhibited a high level of antiviral activity. These included, for example, T-61/T-102, T-217 to T-221, T-235, T-381, T-677, T-377, T-590, T-378, T-591, T-271 to T-272, T-611, T-222 to T-223 and T-60/T-224. Certain of the antiviral peptides contain point mutations and/or amino acid residue additions which vary from the DP178 amino acid sequence.

In FIG. 49C, point mutations and/or amino and/or carboxy-terminal modifications are introduced into the DP178 amino acid sequence itself. As shown in the figure, the majority of the test peptides listed exhibit potent antiviral activity.

Truncations of the DP107 peptide (referred to in IG. 50 as T21) were also produced and tested, as shown in FIG. 50. FIG. 50 also presents data concerning blocked and unblocked peptides which contain additional amino acid residues from the gp41 region in which the DP107 sequence resides. Most of these peptides showed antiviral activity, as evidenced by their low IC_{50} values.

Thus, the results presented in this Section demonstrate that not only do the full length DP107 and DP178 peptides exhibit potent antiviral activity, but truncations and/or mutant versions of these peptides can also possess substantial antiviral character.

29: EXAMPLE: POTENTIAL EPSTEIN-BARR DP178/DP107 ANALOGS: ANTIVIRAL CHARACTERIZATION

In the Example presented herein, peptides derived from the Epstein-Barr (EBV) DP-178/DP107 analog region of the Zebra protein identified, above, in the Example presented in Section 20 are described and tested for anti-EBV activity. It is demonstrated that among these peptides are ones which exhibit potential antiviral activity.

29.1 MATERIALS AND METHODS

Electrophoretic Mobility Shift Assays (EMSA): Briefly, an EBV Zebra protein was synthesized utilizing SP6 RNA polymerase in vitro transcription and wheat germ in vitro translation systems (Promega Corporation recommendations; Butler, E.T. and Chamberlain, M.J., 1984, J. Biol. Chem. 257:5772; Pelham, H.R.B. and Jackson, R.J., 1976, Eur. J. Biochem. 67:247). The in vitro translated Zebra protein was then preincubated with increasing amounts of peptide up to 250 ng/ml prior to the addition of 10,000 to 20,000 c.p.m. of a ^{32}P-labeled Zebra response element DNA fragment. After a 20 minute incubation in the presence of the response element, the reaction was analyzed on a 4% non-denaturing polyacrylamide gel, followed by autoradiography, utilizing standard gel-shift procedures. The ability of a test peptide to prevent Zebra homodimer DNA binding was assayed by the peptide's ability to abolish the response element gel migration retardation characteristic of a protein-bound nucleic acid molecule.

Peptides: The peptides characterized in this study represent peptide walks through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. Specifically, the peptide walks covered the region from amino acid residue 173 to amino acid residue 246 of the EBV Zebra protein.

Each of the tested peptides were analyzed at a range of concentrations, with 150ng/ml being the lowest concentration at which any of the peptides exerted an inhibitory effect.

29.2 RESULTS

The EBV Zebra protein transcription factor contains a DP178/DP107 analog region, as demonstrated in the Example presented, above, in Section 20. This protein appears to be the primary factor responsible for the reactivation capability of the virus. A method by which the DNA-binding function of the Zebra virus may be abolished may, therefore, represent an effective antiviral technique. In order to identify potential anti-EBV DP178/DP107 peptides, therefore, peptides derived from the region identified in Section 20, above, were tested for their ability to inhibit Zebra protein DNA binding.

The test peptides' ability to inhibit Zebra protein DNA binding was assayed via the EMSA assays described, above, in Section 28.1. The data summarized in FIG. 51A-B presents the results of EMSA assays of the listed EBV test peptides. These peptides represent one amino acid "walks" through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. As shown in FIG. 51A-B, the region from which these peptides are derived lies from EBV Zebra protein amino acid residue 173 to 246. A number of the test peptides which were assayed exhibited an ability to inhibit Zebra protein homodimer DNA binding, including 439, 441, 444 and 445.

Those peptides which exhibit an ability to inhibit Zebra protein DNA binding represent potential anti-EBV antiviral compounds whose ability to inhibit EBV infection can be further characterized.

The present invention is not to be limited in scope by the specific embodiments described which are intended as single illustrations of individual aspects

of the invention, and functionally equivalent methods and components are within the scope of the invention. Indeed, various modifications of the invention, in addition to those shown and described herein will become apparent to those skilled in the art from the foregoing description and accompanying drawings. Such modifications are intended to fall within the scope of the appended claims.

WHAT IS CLAIMED IS:

1. An isolated peptide recognized by an ALLMOTI5, 107x178x4 or a PLZIP sequence search motif.

2. The peptide of Claim 1 wherein the peptide corresponds to a peptide present in a virus.

3. The peptide of Claim 2 in which the virus is HIV-1 or HIV-2.

4. The peptide of Claim 2 in which the virus is a respiratory syncytial virus.

5. The peptide of Claim 2 in which the virus is a human parainfluenza virus.

6. The peptide of Claim 2 in which the virus is an influenza virus.

7. The peptide of Claim 2 in which the virus is a hepatitis B virus.

8. The peptide of Claim 2 wherein the virus is an Epstein-Barr virus.

9. A method for the inhibition of transmission of a virus to a cell, comprising contacting the cell with an effective concentration of a peptide recognized by an ALLMOTI5, 107x178x4 or a PLZIP sequence search motif for an effective period of time so that no infection of the cell by the virus occurs.

10. The method of Claim 9 wherein the virus is HIV-1 or HIV-2.

11. The method of Claim 9 wherein the virus is a respiratory syncytial virus.

12. The method of Claim 9 wherein the virus is a human parainfluenza virus.

13. The method of Claim 9 wherein the virus is an influenza virus.

14. The method of Claim 9 in which the virus is a hepatitis B virus.

15. The method of Claim 9 wherein the virus is an Epstein-Barr virus.

HIV1LAI (DP-178; SEQ ID:1)	YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF
HIV1SF2 (DP-185; SEQ ID:3)	YTNTIYNLLEESQNQQEKNEQELLELDKWASLWNWF
HIV1RF (SEQ ID:4)	YTGIIYNLLEESQNQQEKNEQELLELDKWANLWNWF
HIV1MN (SEQ ID:5)	YTSLIYSLLEKSQTQQEKNEQELLELDKWASLWNWF
HIV2ROD (SEQ ID:6)	LEANISKSLEQAQIQQEKNMYELQKLNSWDIFGNWF
HIV2NIHZ (SEQ ID:7)	LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL
DP180 (SEQ ID:2)	SSESFTLLEQWNNWKLQLAEQWLEQINEKHYLEDIS
DP118 (SEQ ID:10)	QQLLDVVKRQQEMLRLTVWGTKNLQARVTAIEKYLKDQ
DP125 (SEQ ID:8)	CGGNNLLRAIEAQQHLLQLTVWGIKQLQARILAVERYLKDQ
DP116 (SEQ ID:9)	LQARILAVERYLKDQQQ

FIG.1

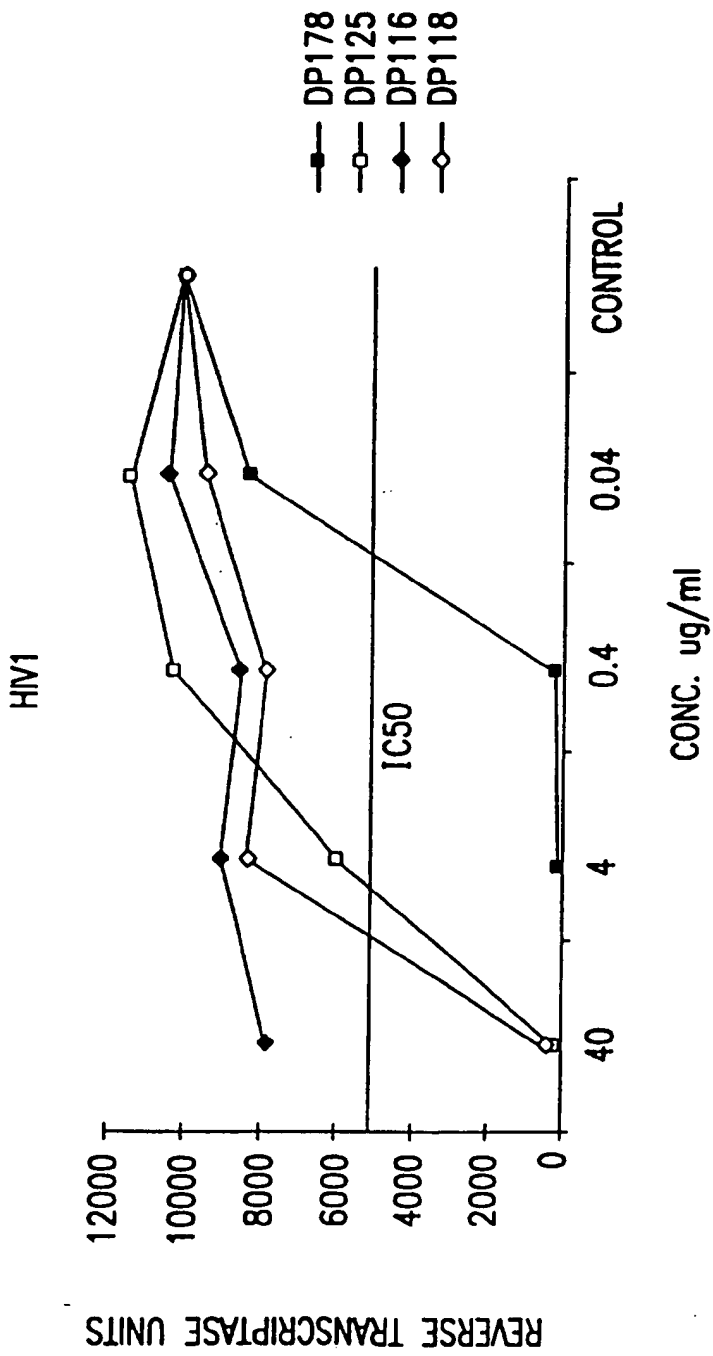

DP178
DP125
DP116
DP118
HIV1
IC50
CONTROL
0.04
0.4
4
40
CONC. ug/ml
12000
10000
8000
6000
4000
2000
0
REVERSE TRANSCRIPTASE UNITS

FIG.2

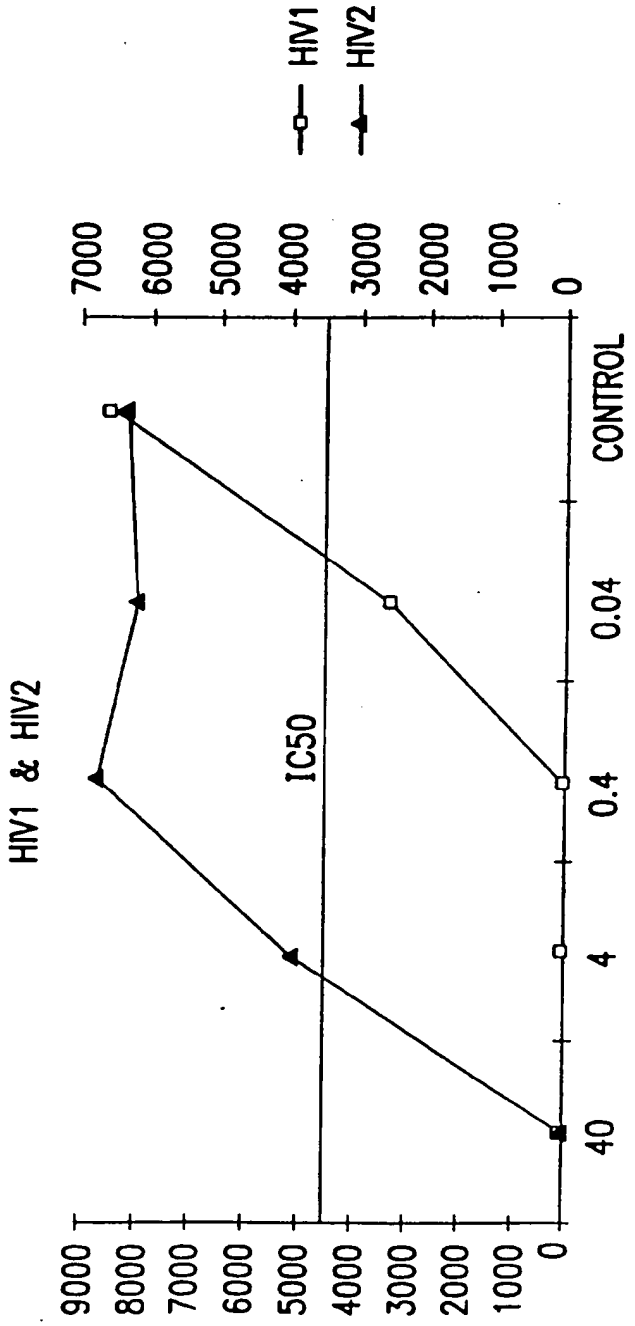

HIV1
HIV2
HIV1 & HIV2
IC50
CONTROL
PD178 CONC. ug/ml
0
0.04
0.4
4
40
1000
2000
3000
4000
5000
6000
7000
8000
9000

FIG.3

Number of Syncytia/well: concentration in μg/ml (micrograms/ml)

DP178	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	0	0	0	0	0	0	0	0	67
HIV1MN	0	0	0	0	0	ND	ND	ND	34
HIV1RF	0	0	0	0	0	ND	ND	ND	65
HIV1SF2	0	0	0	0	0	ND	ND	ND	58

DP125	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	0	0	54	69	80	75	79	82	67
HIV1MN	0	0	30	36	ND	ND	ND	ND	34
HIV1RF	0	0	67	63	ND	ND	ND	ND	65
HIV1SF2	0	0	9	66	ND	ND	ND	ND	58

DP116	10	5	1	0.2	0.1	0.05	0.025	0.0125	Control
Syncytia									
HIV1LAI	75	ND	ND	ND	ND	ND	ND	ND	67
HIV1MN	35	ND	ND	ND	ND	ND	ND	ND	34
HIV1RF	81	ND	ND	ND	ND	ND	ND	ND	65
HIV1SF2	81	ND	ND	ND	ND	ND	ND	ND	58

FIG.4A

DP180	40	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia									
HIV1LAI	50	>45	>45	>45	>45	>45	>45	>45	58

DP185	40	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia									
HIV1LAI	0	0	0	0	0	0	0	ND	60

FIG.4B

HIV1

	Number of Syncytia/well: concentration in ng/ml (nanograms/ml)							
DP178	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV1	0	0	0	0	0	14	20	48
DP116	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV1	ND	48	ND	ND	ND	ND	ND	ND

HIV2

	Number of Syncytia/well: concentration in µg/ml (micrograms/ml)							
DP178	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV2	50	54	55	57	63	77	78	76
DP116	20	10	5	2.5	1.25	0.625	0.3125	Control
Syncytia HIV2	ND	58	ND	ND	ND	ND	ND	ND

FIG.5

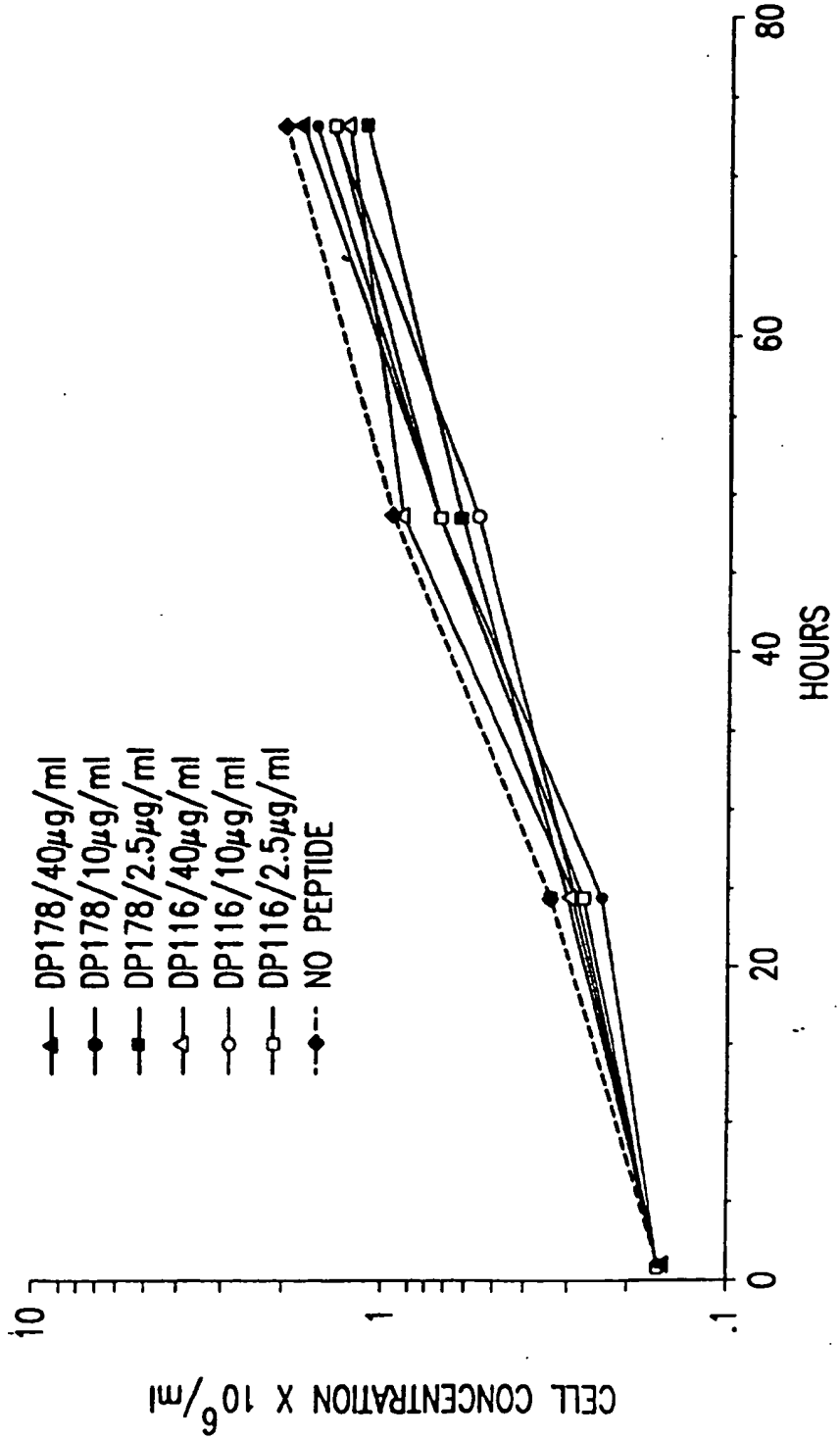

CELL CONCENTRATION X 10^6/ml
10
1
.1
0
20
40
60
80
HOURS
DP178/40μg/ml
DP178/10μg/ml
DP178/2.5μg/ml
DP116/40μg/ml
DP116/10μg/ml
DP116/2.5μg/ml
NO PEPTIDE

FIG.6

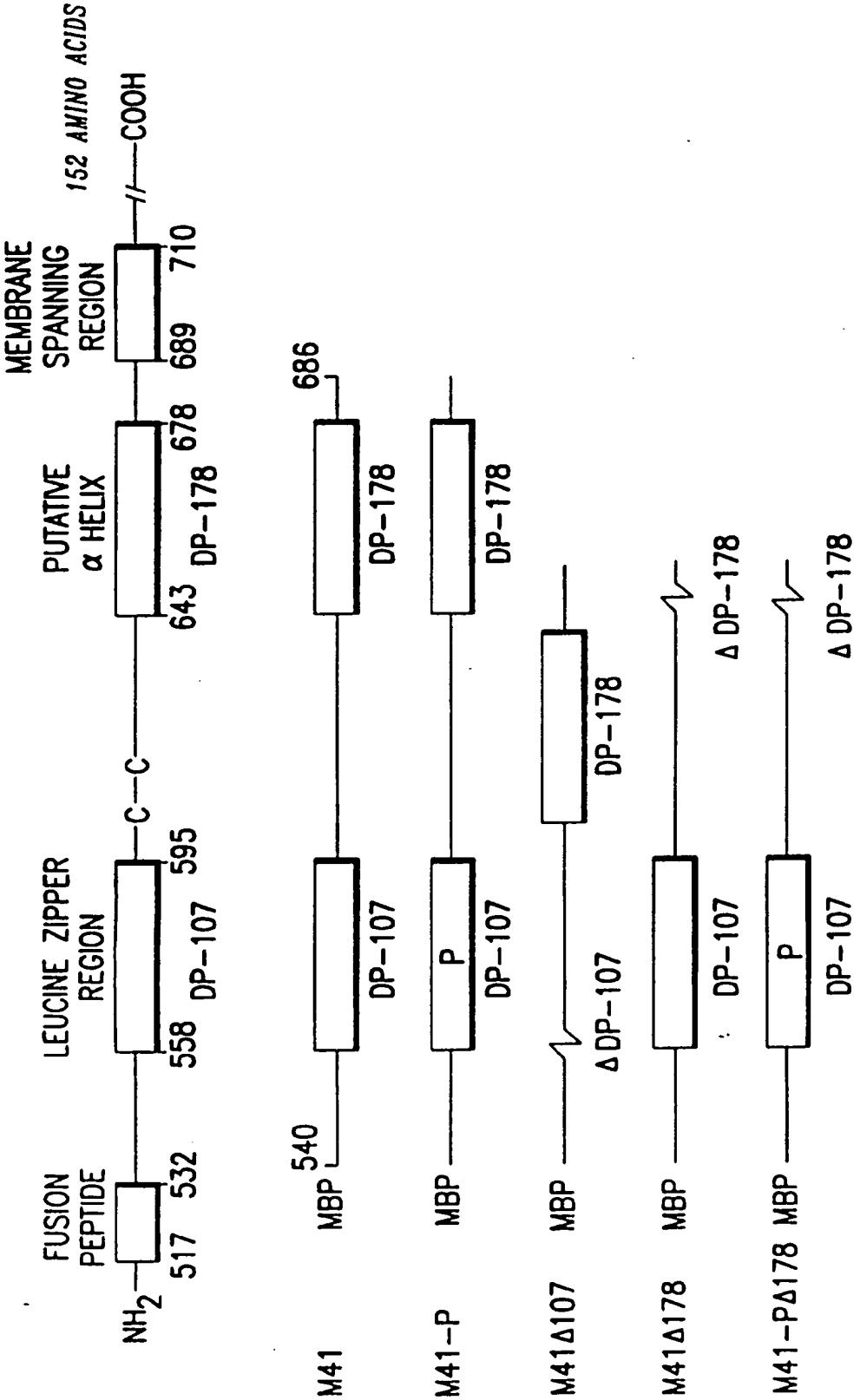

NH2
FUSION PEPTIDE
517
532
LEUCINE ZIPPER REGION
558
DP-107
595
C—C
PUTATIVE α HELIX
643
DP-178
678
MEMBRANE SPANNING REGION
689
710
152 AMINO ACIDS
COOH
M41
MBP
540
DP-107
DP-178
686
M41-P
MBP
P
DP-107
DP-178
M41Δ107
MBP
ΔDP-107
DP-178
M41Δ178
MBP
DP-107
ΔDP-178
M41-PΔ178
MBP
P
DP-107
ΔDP-178

FIG.7

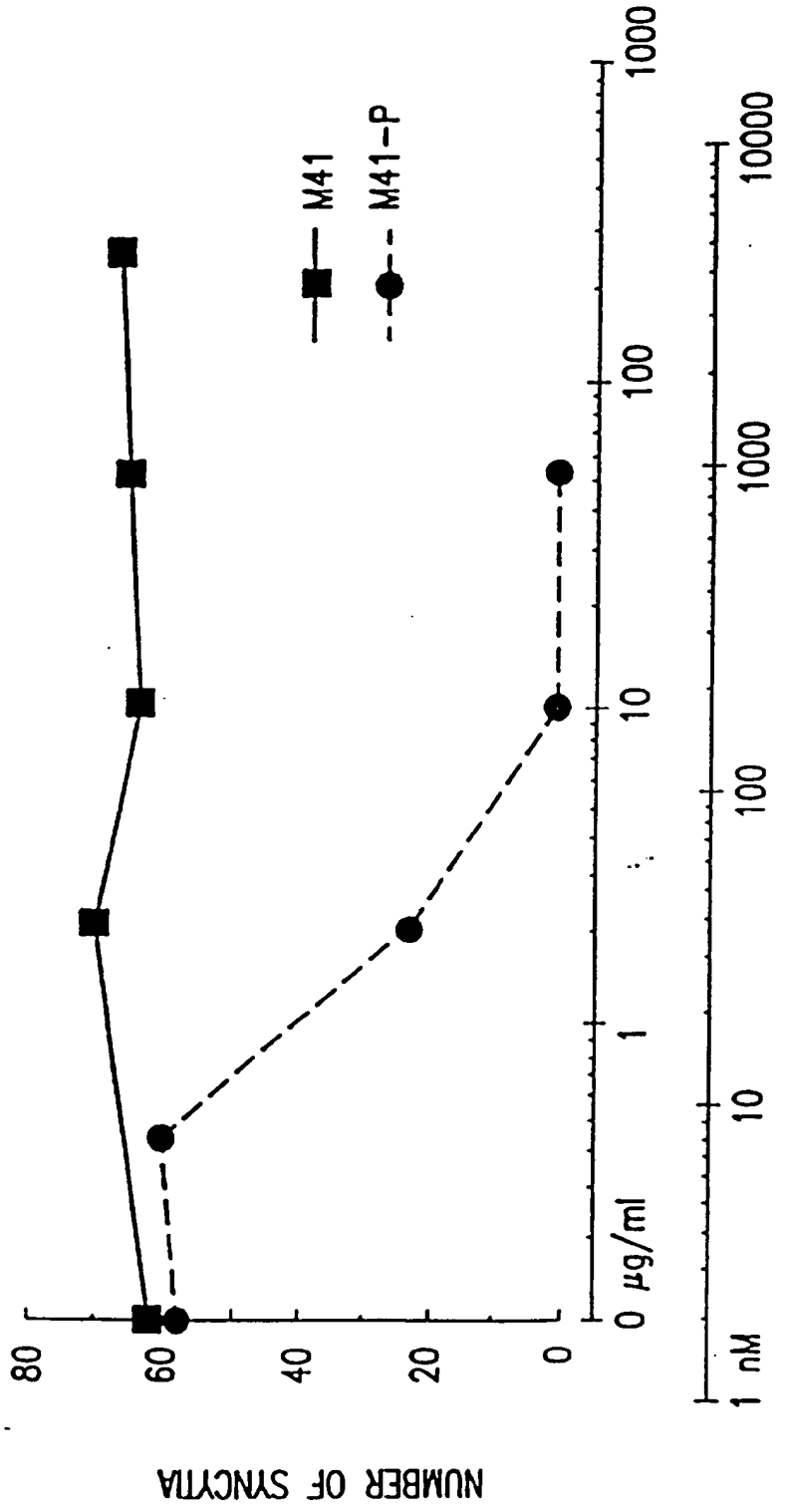

M41
M41-P
NUMBER OF SYNCYTIA
80
60
40
20
0
0 µg/ml
1 nM
1
10
100
1000
10
100
1000
10000

FIG.8

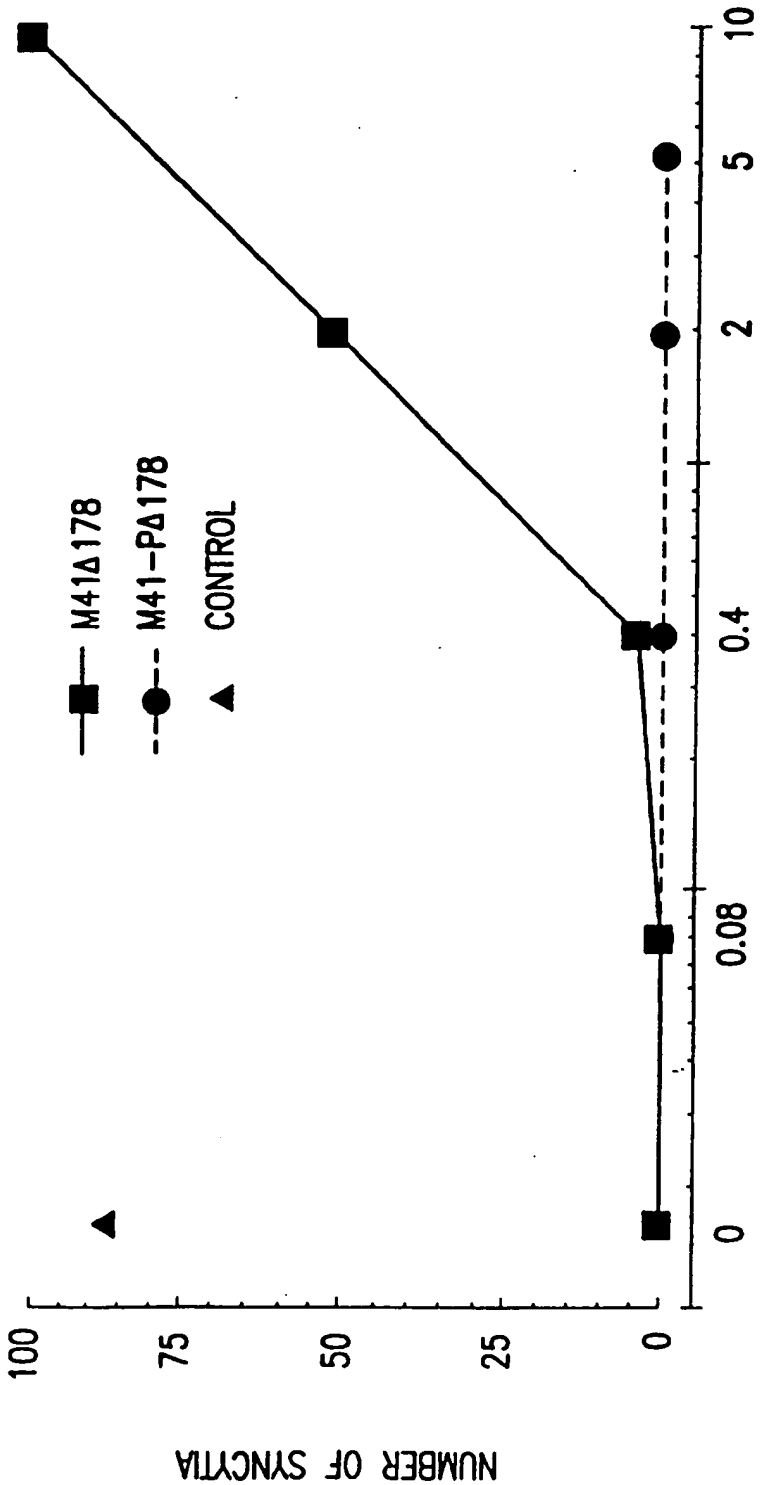

M41Δ178
M41-PΔ178
CONTROL
NUMBER OF SYNCYTIA
100
75
50
25
0
0
0.08
0.4
2
5
10
μg/ml

FIG.9

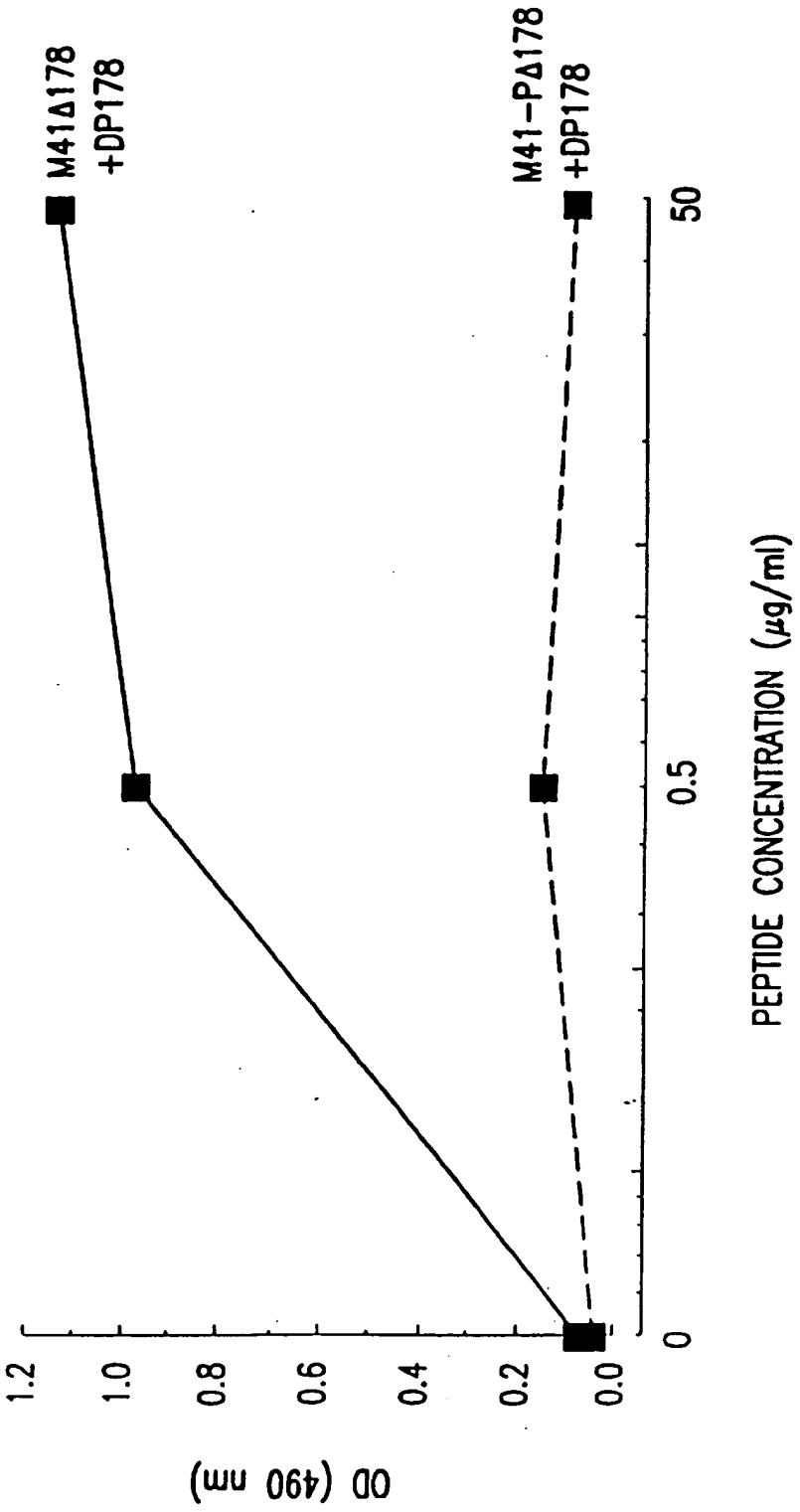

M41Δ178
+DP178
M41-PΔ178
+DP178
OD (490 nm)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0
0.5
50
PEPTIDE CONCENTRATION (μg/ml)

FIG.10

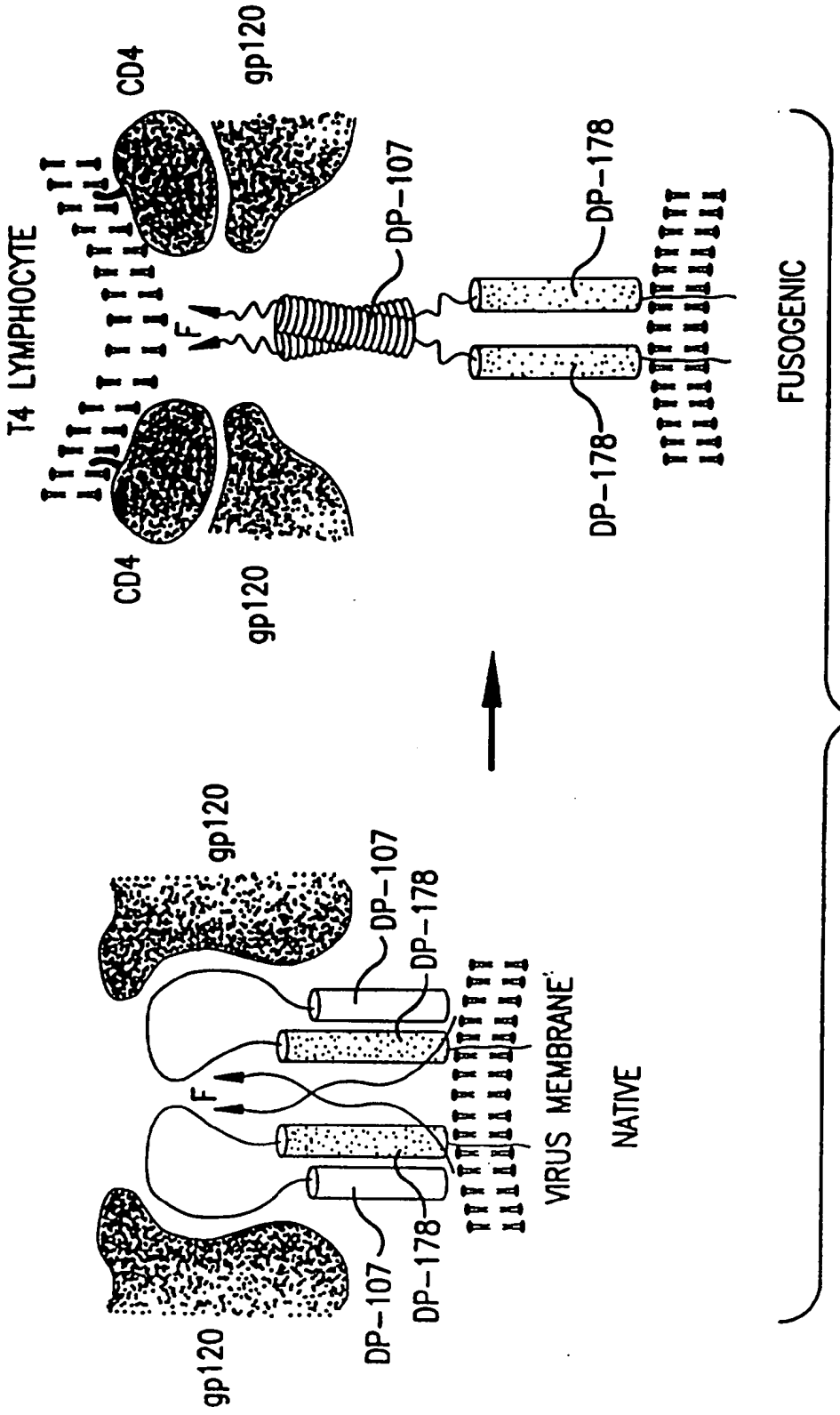

T4 LYMPHOCYTE
CD4
gp120
DP-107
DP-178
F
FUSOGENIC
NATIVE
VIRUS MEMBRANE

FIG.11A

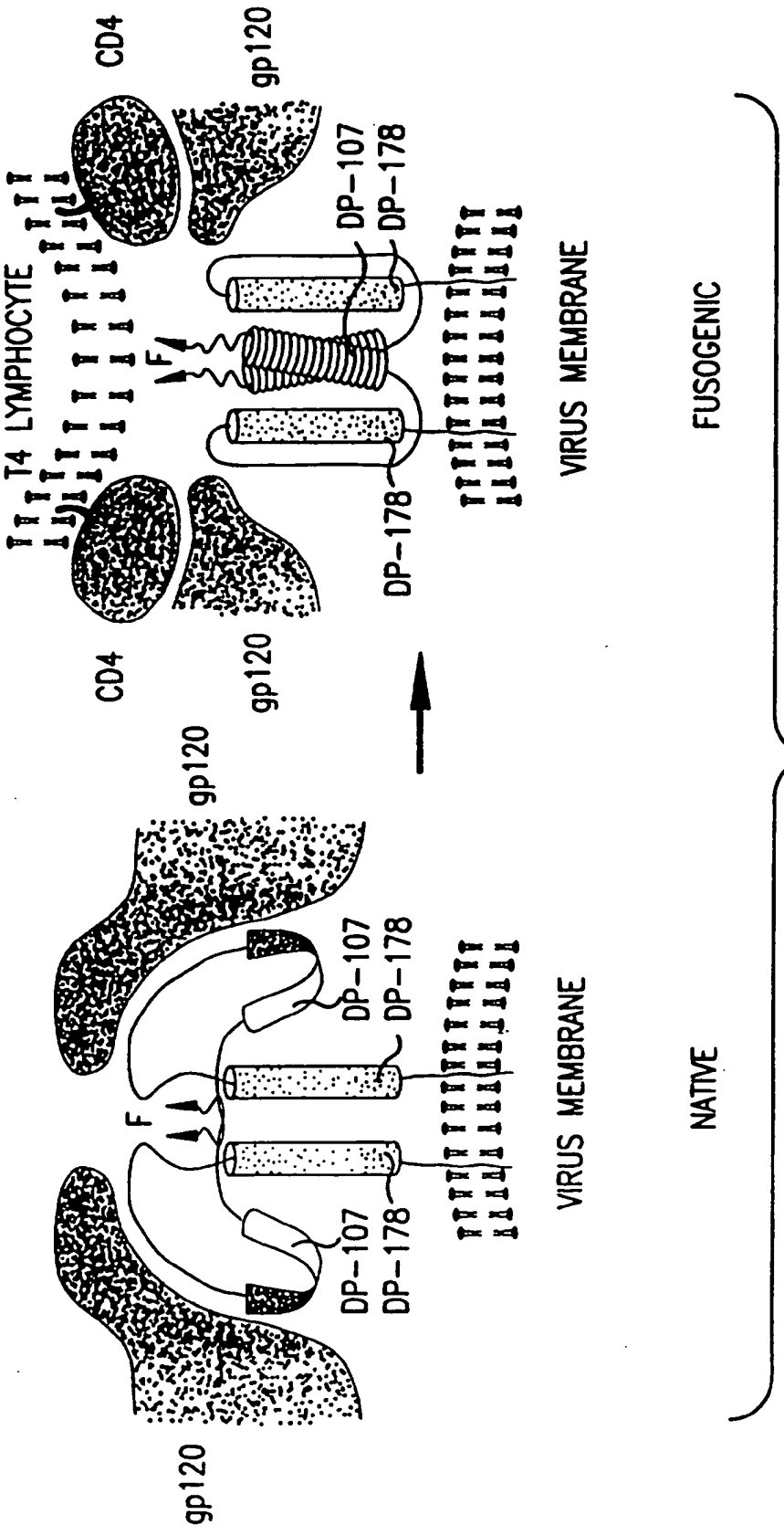

CD4
gp120
T4 LYMPHOCYTE
DP-107
DP-178
F
VIRUS MEMBRANE
FUSOGENIC
NATIVE

FIG.11B

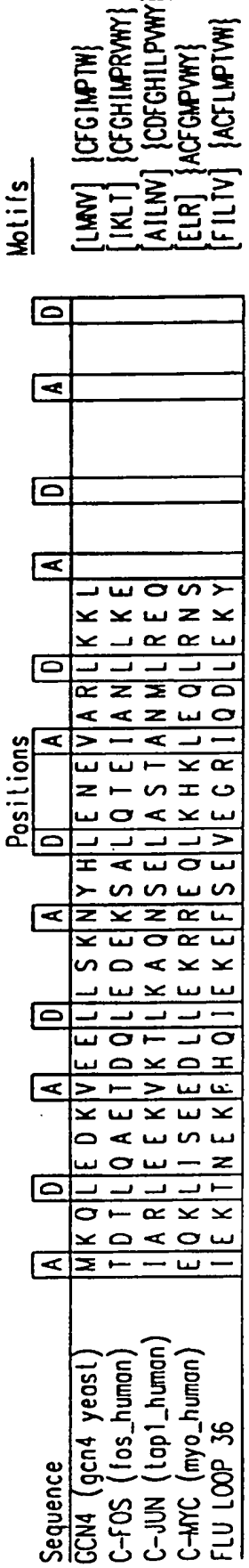

Positions
Sequence
A D D A D D A D A D
GCN4 (gcn4 yeast) M K Q L E D K V E E L L S K N Y H L E N E V A R L K K L
C-FOS (fos_human) T D T L Q A E T D Q L E D E K S A L Q T E I A N L L K E Q
C-JUN (jap1_human) I A R L E E K V K T L K A Q N S E L A S T A N M L R E Q
C-MYC (myo_human) E Q K L I S E E D L L K R R E Q L K H K L E Q L R N S
FLU LOOP 36 I E K T N E K F H Q I E K E F S E V E G R I Q D L E K Y
Motifs
[LMNV] {CFGIMPTW}
[IKLT] {CFGHIMPRVWY}
[AILNV] {CDFGHILPVWY}
[ELR] {ACFGMPVWY}
[FILTV] {ACFLMPTVW}

FIG.12

Sequence	Positions																																					Motifs
	A		D			A		D			A		D			A		D			A		D			A		D									
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I									[ILQT] {CFIMPSTY}
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L		[ILQTV] {CDFIMPST}
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] {CDFIMPST}
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I												[EKLNQV] {CDFKMPSVY}
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L				[EKLNQV] {CFKMPS}
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[EKLNQV] {CFKMPS}
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K												[EKLQY] {ACFGMPRVWY}
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W				[EKLQWY] {CFGMPRVY}
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F			[EFKLQWY] {CFGMPRVY}
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K									[EILNQSY] {ACFGMPRVWY}
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W		[EILNQSWY] {CFGMPRVY}
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] {CFGMPRVY}

FIG.13

SUBSTITUTE SHEET (RULE 26)

Sequence	Positions																																					Parent Motif	Hybrid Motif
	A		D			A		D			D		A		D			A		D			D			A		D			A		D					
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L										[LMNV] {CFGIMPTW}	
DP-107 (env_hv1bru)L1=D	N	N	L	L	R	A	I	E	A	Q	H	L	L	Q	L	T	V	W	G	I	I	K	Q	L	Q	A	R	I										[ILQT] {CFIMPSTY}	[ILMNQTV] {CFIMPT}
DP-107 (env_hv1bru)L1=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L		[ILQTV] {CDFIMPST}	[ILMNQTV] {CFIMPT}
DP-107 (env_hv1bru)L1=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] {CDFIMPST}	[ILMNQTV] {CFIMPT}
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I										[EKLNQV] {CDFKMPSVY}	[EKLMNQV] {CFMP}
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L			[EKLNQV] {CFKMPS}	[EKLMNQV] {CFMP}
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[EKLNQV] {CFKMPS}	[EKLMNQV] {CFMP}

FIG. 14

Sequence	Positions																				Parent Motif	Hybrid Motif
	A	D	D	A	D	A	D	D	A	D	D	A	D	D	A	D	D	A	D	D		
GCN4 (gcn4_yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L					[LMNV] {CFGIMPTW}	
DP-178 (env_hv1bru)Y1=A			Y	T	S	L	I	H	S	L	I	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K			[EKLQY] {ACFGMPRVWY}	[EKLMNQVY] {CFGMPW}
DP-178 (env_hv1bru)Y1=A			Y	T	S	L	I	H	S	L	I	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W			[EKLQWY] {CFGMPRVY}	[EKLMNQWY] {CFGMP}
DP-178 (env_hv1bru)Y1=A			Y	T	S	L	I	H	S	L	I	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F		[EFKLQWY] {CFGMPRVY}	[EFKLMNQWY] {CFGMP}
DP-178 (env_hv1bru)Y1=D					Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K			[EILNQSY] {ACFGMPRVWY}	[EILMNQSVY] {CFGMPW}
DP-178 (env_hv1bru)Y1=D					Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W			[EILNQSWY] {CFGMPRVY}	[EILMNQSVWY] {CFGMP}
DP-178 (env_hv1bru)Y1=D					Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F		[EFILNQSWY] {CFGMPRVY}	[EFILMNQSVWY] {CFGMP}

FIG.15

Sequence	Positions																																Parent Motif	Hybrid Motif
	A		D			A			D				A			D				A			D				A			D				
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q			[ILQTV]	{CDFIMPST}
DP-107 (env_hv1bru)L2=D		N	N	L	L	R	A	I	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q			[EKLNQV]	{CFKMPS}
DP-178 (env_hv1bru)Y1=A		Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F					[EFKLQWY]	{CFGMPRVY}
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F			[EFILNQSWY]	{CFGMPRVY}
FLU LOOP 36		I	E	K	T	N	E	K	F	H	Q	I	E	K	E	F	S	E	V	E	G	R	I	Q	D	L	E	K	Y														[FILTV]	{ACFLMPTVW}

FIG.16

Sequence	Positions																																				Parent Motif	Hybrid Motif
	A		D			A		D		A		D		A		D		A		D		A		D												
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L									[LMNV] {CFGIMPTW}	
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] {CDFIMPST}	
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	M	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F				[EFKLQHY] {CFGMPRVY}	[EFIKLMNQTVWY] {CFMP}
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L									[LMNV] {CFGIMPTW}	
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	[ILQTV] {CDFIMPST}	
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] {CFGMPRVY}	[EFILMNQRSTVWY] {CFMP}
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L									[LMNV] {CFGIMPTW}	
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q		[EKLNQV] {CFKMPS}	
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F				[EFKLQHY] {CFGMPRVY}	[EFKLMNQVWY] {CFMP}
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L									[LMNV] {CFGIMPTW}	
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q		[EKLNQV] {CFKMPS}	
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F	[EFILNQSWY] {CFGMPRVY}	[EFIKLMNQSVWY] {CFMP}

FIG.17

Positions

Sequence	A			D				A			D				A			D				A			D				A			D				A			D
GCN4 (gcn4 yeast)	M	K	Q	L	E	D	K	V	E	E	L	L	S	K	N	Y	H	L	E	N	E	V	A	R	L	K	K	L											
DP-107 (env_hv1bru)L1=D		N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q
DP-107 (env_hv1bru)L2=D	N	N	L	L	R	A	I	E	A	Q	Q	H	L	L	Q	L	T	V	W	G	I	K	Q	L	Q	A	R	I	L	A	V	E	R	Y	L	K	D	Q	
DP-178 (env_hv1bru)Y1=A	Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F			
DP-178 (env_hv1bru)Y1=D				Y	T	S	L	I	H	S	L	I	E	E	S	Q	N	Q	Q	E	K	N	E	Q	E	L	L	E	L	D	K	W	A	S	L	W	N	W	F
C-FOS (fos_human)	T	D	T	L	Q	A	E	T	D	Q	L	E	D	E	K	S	A	L	Q	T	E	I	A	N	L	L	K	E											
C-JUN (lap1_human)	I	A	R	L	E	E	K	V	K	T	L	K	A	Q	N	S	E	L	A	S	T	A	N	M	L	R	E	Q											
C-MYC (myo_human)	E	Q	K	L	I	S	E	E	D	L	L	E	K	R	R	E	Q	L	K	H	K	L	E	Q	L	R	N	S											
FLU LOOP 36	I	E	K	T	N	E	K	F	H	Q	I	E	K	E	F	S	E	V	E	G	R	I	Q	D	L	E	K	Y											

Sequence	Parent Motif	Hybrid Motif
GCN4 (gcn4 yeast)	[LMNV] {CFGIMPTW}	
DP-107 (env_hv1bru)L1=D	[ILQTV] {CDFIMPST}	
DP-107 (env_hv1bru)L2=D	[EKLNQV] {CFKMPS}	
DP-178 (env_hv1bru)Y1=A	[EFKLQWY] {CFGMPRVY}	
DP-178 (env_hv1bru)Y1=D	[EFILNQSWY] {CFGMPRVY}	
C-FOS (fos_human)	[IKLT] {CFGHIMPRVWY}	
C-JUN (lap1_human)	[AILNV] {CDFGHILPVWY}	
C-MYC (myo_human)	[ELR] {ACFGMPVWY}	
FLU LOOP 36	[FILTV] {ACFLMPTVW}	[AEFIKLMNQRSTVWY] {CFP} = {CDGHP} {CFP}

FIG.18

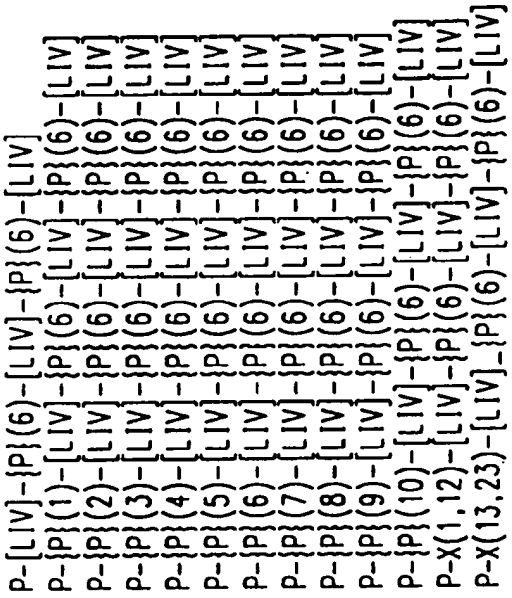

P-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(1)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(2)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(3)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(4)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(5)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(6)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(7)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(8)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(9)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-{P}(10)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-X(1,12)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]
P-X(13,23)-[LIV]-{P}(6)-[LIV]-{P}(6)-[LIV]

FIG.19

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠
♥.....ELGELG A AGSTMGARSM TLTVQARQ ♠LLSGIVQQQ *DP107-NNL*

LRAIEAQQHL LQLTVWGIKQ LQARILAVER YLKDQ-DP107 QLLG♠♥ I WGC

♠107x178x4♠
♥ALLMOTI5♥ *LVS Coiled-Coil*
SGKLICT TAVP ♥WNASWS NKSLEQIWNN MTWM *E ♠WDREINN *DP178-*

YTSLIHSL IEESQNQQEK NEQELLELDK WASLWNWF-DP178* NI

♦Transmembrane Region♦
TNWLWYIK♠ ♦IF IMIVGGLVGL RIVFAVLSIV NRVRQGYS♥ PL

♣P23LZIPC♣
SFQTHLPTPR GPDR ♣PEGIEE EGGERDRDRS IRLVNGSLAL IWDDLRSL♣ CL

♥ALLMOTI5♥ ♠107x178x4♠
F ♥SYHRLRDLL LIVTRIVELL GRRGW ♠EALKY WWNLLQYWSQ

ELKNSAVSLL NAT♠ AIAVAEG TDRVIEVVQG A♥ CRAIRHIPR

RIRQGLERIL L

FIG. 20

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠
♥.....FLGEL LGVGSAIAS GVA ♠VSKVLHLEGEVNKIKSA

♣P1&12LZIPC♣
LLSTNKAVVS LSNGVSVLTS KVLDLKNYID KQ♠♥ LL ♣PIVNKQ

♠107x178x4♠
SC ♠SISNIETVI♣ EFQQKNNRLLEITREFSVNAG♠ VTTPVSTMLTNSELLSL

♣P1&12LZIPC♣
♥ALLMOTI5♥
INDM ♣PI ♥TNDQ KKLMSNNVQI V♣ RQQSYSI♣ MS IIKEEVLAYV

VQ♥ LPLYGVID TPCWKLHTSP LCTTNTKEGS NICLTRTDRG WYCDNAGSVS

FFPQAETCKV QSNRVFCDTM NSLTLPSEIN LCNVDIFNPK

YDCKIMTSKT DVSSSVITSL GAIVSCYGKT KCTASNKNRG

IIKTFSNGCDYVSNKGMDTV SVGNTLYYVN KQEGKSLYVK G

♣P7, 12, & 23LZIPC♣
♠107x178x4♠ ♥ALLMOTI5♥
EPIINFYDPLVF ♣PSDE ♠FDASISQVNEKINQSLAF ♥I♣ RKSDELL♣

♦Transmembrane Region♦
HNVNA♠ GK STTN ♦IMITTIIVIIVILLS LIAVGLLLY♥ C♦

KARSTPVTLS KDQLSGINNI AFSN

FIG. 21

Fusion
Peptide ♥ALLMOTI5♥ ♠107x178x4♠
.....ELGELG ♥AAGTA MGAAA ♠TALTVQSQHLLAGILQQQKNLLAAV

♠107x178x4♠
EAQ♠ QQM ♠LKLTIWGVKNLNARVTALEKYLEDQARLN♠ AWG♥ CA

LVS Coiled-Coil
♥ALLMOTI5♥ ♠107x178x4♠
WKQVCHTTVP WQWNNRTPDW ♥NNMT *WLE ♠WERQISYLEGNIT

♠107x178x4♠
TQLEEARAQEEKNLD♠ AYQKLSS* WSDFWSW♥ FDF ♠SKWLN ♦ILK

♦Transmembrane Region♦
IGELDVLGIIGLRLLYTV♦ YS♠ CIARVRQGYS PLSPQIHIHP WKGQPDNAEG

PGEGGDKRKN SSEPWQKESG TAEWKSNWCK RLTNWCSISS IWLYNS

♥ALLMOTI5♥
♥CLTL LVIHLRSAFQY IQYGLGELKA AAQEAVVALA RLAQNAGYQIWL♥

ACRSAYRA IINSPRRVRQ GLEGILN

FIG. 22

Fusion ♠107x178x4♠
Peptide ♥ALLMOTI5♥ *LVS Coiled-Coil*
.....FAG ♥YVL AGVALGVATA AQITAGIALHQ ♠*SNLNAQAIQ

SLRTSLEQSNKAIEEIREATQETVIA* YQGVQDY♠ VNNEL♥ VP

♥ALLMOTI5♥
♠107x178x4♠
♣P6 & 12LZIPC♣
AMQHMSCELVGQRLGLRLLRYYTELLSIFGPSLRD ♣PISA ♠♥EISIQALIYAL

GGEIHKILEKLGYSGSD♠ MIAILESRGIKTKI♥ THVDLPGKF IILSISY

♣P1 & 12LZIPC♣
♣PTLSEVKGVIVHRLEAV♣ SYNIGSQEWYTTVPRYIATNGYLISNFDESSCVFVS

ESAICSQNSL YPMSPLLQQC IRGDTSSCAR TLVSGTMGNK FILSKGNIVA

NCASILCKCY STSTIINQSP DKLLTFIASD TCPLVEIDGA TIQVGGRQYP

LVS Coiled-Coil
♥ALLMOTI5♥
♣P12 & 23LZIPC♣
DMVYEGKVAL G ♣PAISLD ♥RL*DVGTNLGNALKKLDDAKVLI♣

♦Transmembrane Region♦
DSS♣ NQILETVR RS♥* SFN ♦FGSLL SVPILSCTAL ALLLLIYCC♦

K RRYQQTLKQH TKVDPAFKPD LTGTSKSYVR SL

FIG. 23

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠
♥.....EIGAI IGSVALGVA TAAQITAASA LIQANQNAAN ♠ILRLKESITA

TIEAVHEVTDGLSQLAVA♠ VG KM♥ QQFVNDQFNNTAQELDCIKITQQV

♥ALLMOTI5♥
GVELNLYLTELTTV FGPQITSPAL ♥TQLTIQALYNAGGNMDYLLTKLGVG

♣P1 & 12LZIPC♣
NNQLSSLIGSGLIT GN♥ ♣PILYDSQT QLLGIQVTLP SVGNLNNMRATYLET

LSVST TKGFASALVP KVVTQVGSVI EELDTSYCIE TDLDLYCTRI VTFPMSPGIY

SCLNGNTSAC MYSKTEGALT TPYMTLKGSV IANCKMTTCR CADPPGIISQ

♥ALLMOTI5♥
♠107x178x4♠
NYGEAVSLID RHSCN ♠♥VLSLD GITLRLSGEF DATYQKNISI LDSQVIVTG

LVS Coiled-Coil ♦Trans-
N LDISTELGNV NNSISNALDK LEESNSKLDK VNVKLTSTSA ♦LIT YIA

membrane Region♦
LTAISLVCGILSLV♥♠ LACYLMY♦ KQKAQQKTLLWLGNNTLGQMRATTKM

FIG. 24

Fusion ♥ALLMOTI5♥
Peptide ♠107x178x4♠ *LVS Coiled-Coil*
.....FFGGV ♠IG ♥TIALG *VATSAQITAAVALVEAKQARSDIEKLKE

AIRDTNKAVQSVQSSIGNLIVAIKSVQ* DYVNKE♥♠ IVPSIARLGCEAAG

♥ALLMOTI5♥
♠107x178x4♠
LQLGIALTQH ♠♥YSELTNIFGDNIGSLQEKGIKLQGIASLYRTNITE♥♠

♣P5 & 12LZIPC♣
IFTTSTVDKYDIYDLLFTESIKVRVIDVDLNDYSITLQVRL ♣PLLTRLLNTQIYR

VDSISYNI♣ QNREWYI♣ PLPSHIMTKGAFLGGADVKECIEAFSSYIC

PSDPGFVLNHEMESCLSGNISQCPRTVVKSDIVPRYAFVNGGVVANCITT

TCTCNGIGNRINQPPDQGVKIITHKECNTIGINGMLFNTNKEGTLAFYTP

♥ALLMOTI5♥
♠107x178x4♠
♣P6 & 23LZIPC♣
NDITLNNSVALD ♣PIDI ♠SIELN ♥KAKSDLEESKEWI♣ RRSNQKL♣

♦Transmembrane Region♦
DSIGNWHQSSTT ♦IIIV♠ LIM IIILFIINVT II♦ IIAVKYY♥ R

IQKRNRVIDQN DKPYVLTNK

FIG. 25

Fusion
Peptide
.....GLFGAI AGFIENGWEGMIDGWYGFRHQNSEGTG

♠107x178x4♠
♥ALLMOTI5♥
•LVS Coiled-Coil•
•Q ♥AADLKST ♠QAAIDQINGKLNRVIEKTNEKFHQIEKEFSEVEGRIQ

DLEKYVEDTKIDL• WSYNAELLVALENQHTI♠ DLT♥ DSEMNKLFEKTR

RQLRENAEEMGNGCFKIYHKCDNACIESIRNGTYDHDVYRDEALNNRFQIKG

VELKSGYKDWILWISFAISCFLLCVVLLGFIMWACQRGNIRCNICI

FIG. 26

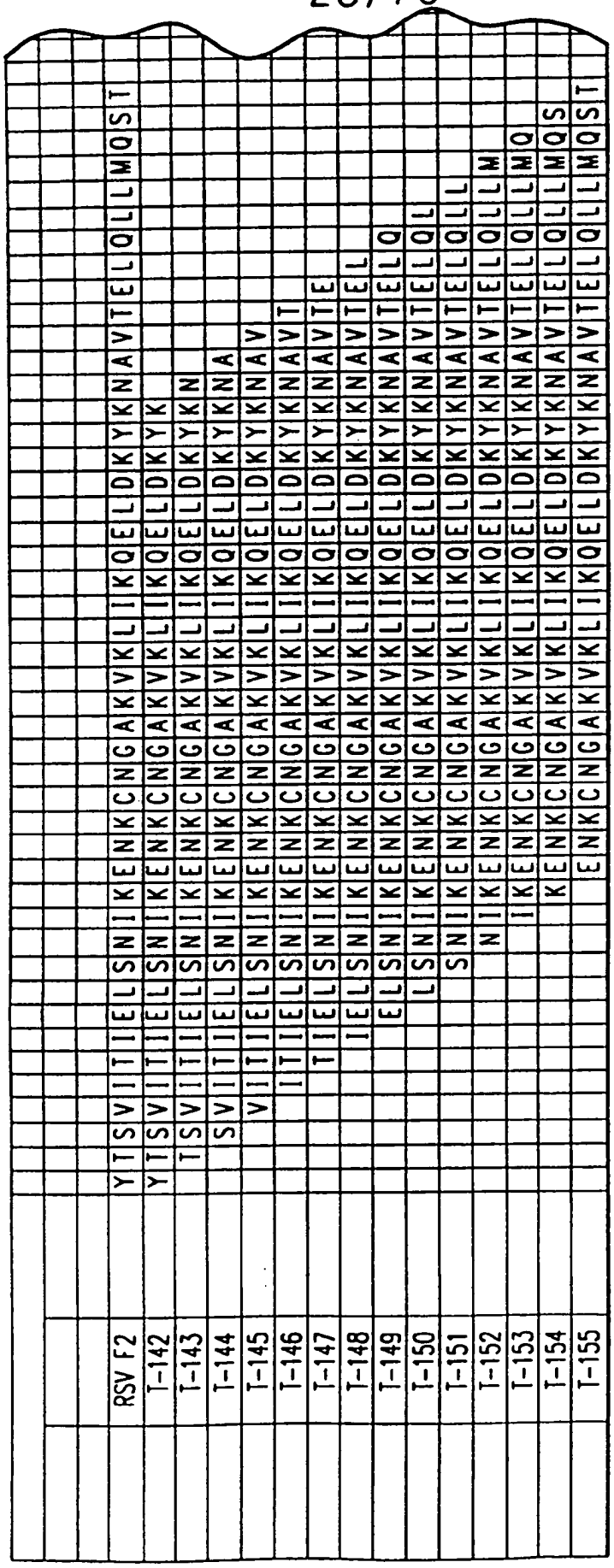
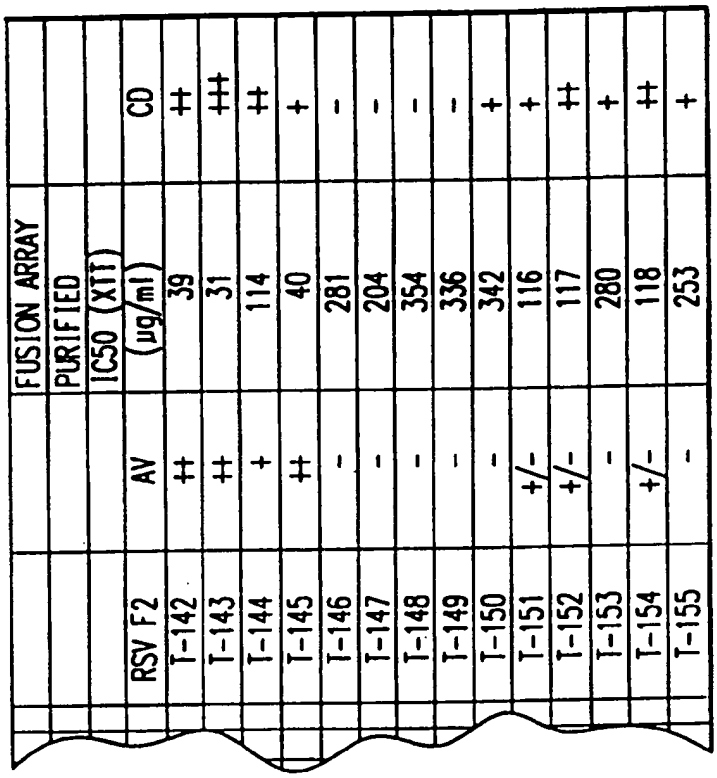

RSV F2
T-142
T-143
T-144
T-145
T-146
T-147
T-148
T-149
T-150
T-151
T-152
T-153
T-154
T-155

FIG.27A



	FUSION ARRAY		
	PURIFIED		
		IC50 (XTT) (μg/ml)	CD
RSV F2	AV		
T-142	++	39	++
T-143	++	31	+++
T-144	+	114	++
T-145	++	40	+
T-146	-	281	-
T-147	-	204	-
T-148	-	354	-
T-149	-	336	-
T-150	-	342	+
T-151	+/-	116	+
T-152	+/-	117	++
T-153	-	280	+
T-154	+/-	118	++
T-155	-	253	+

FIG.27B

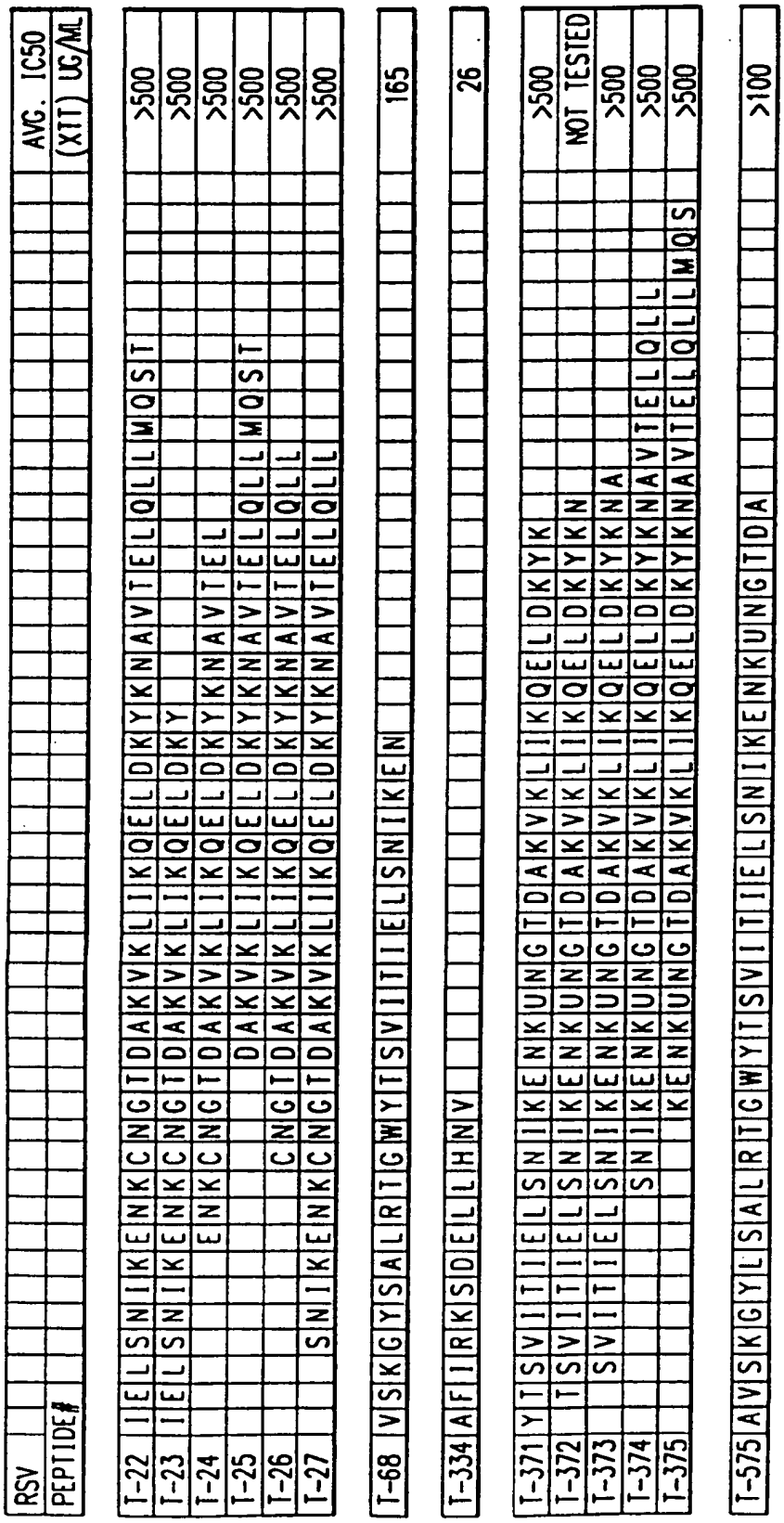

RSV
PEPTIDE#
AVG. IC50
(XIT) UG/ML
T-22 IELSNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLLMQST >500
T-23 IELSNIKENKCNGTDAKVKLIKQELDKY >500
T-24 ENKCNGTDAKVKLIKQELDKYKNAVTEL >500
T-25 DAKVKLIKQELDKYKNAVTELQLLMQST >500
T-26 CNGTDAKVKLIKQELDKYKNAVTELQLL >500
T-27 SNIKENKCNGTDAKVKLIKQELDKYKNAVTELQLL >500
T-68 VSKGYSALRTGWYTSVITIELSNIKEN 165
T-334 AFIIRKSDELLHNV 26
T-371 YTSVITIELSNIKENKUNGTDAKVKLIKQELDKYK >500
T-372 TSVITIELSNIKENKUNGTDAKVKLIKQELDKYKN NOT TESTED
T-373 SVITIELSNIKENKUNGTDAKVKLIKQELDKYKNA >500
T-374 SNIKENKUNGTDAKVKLIKQELDKYKNAVTELQLLL >500
T-375 KENKUNGTDAKVKLIKQELDKYKNAVTELQLLMQS >500
T-575 AVSKGYLSALRTGWYTSVITIELSNIKENKUNGTDA >100

FIG.27C

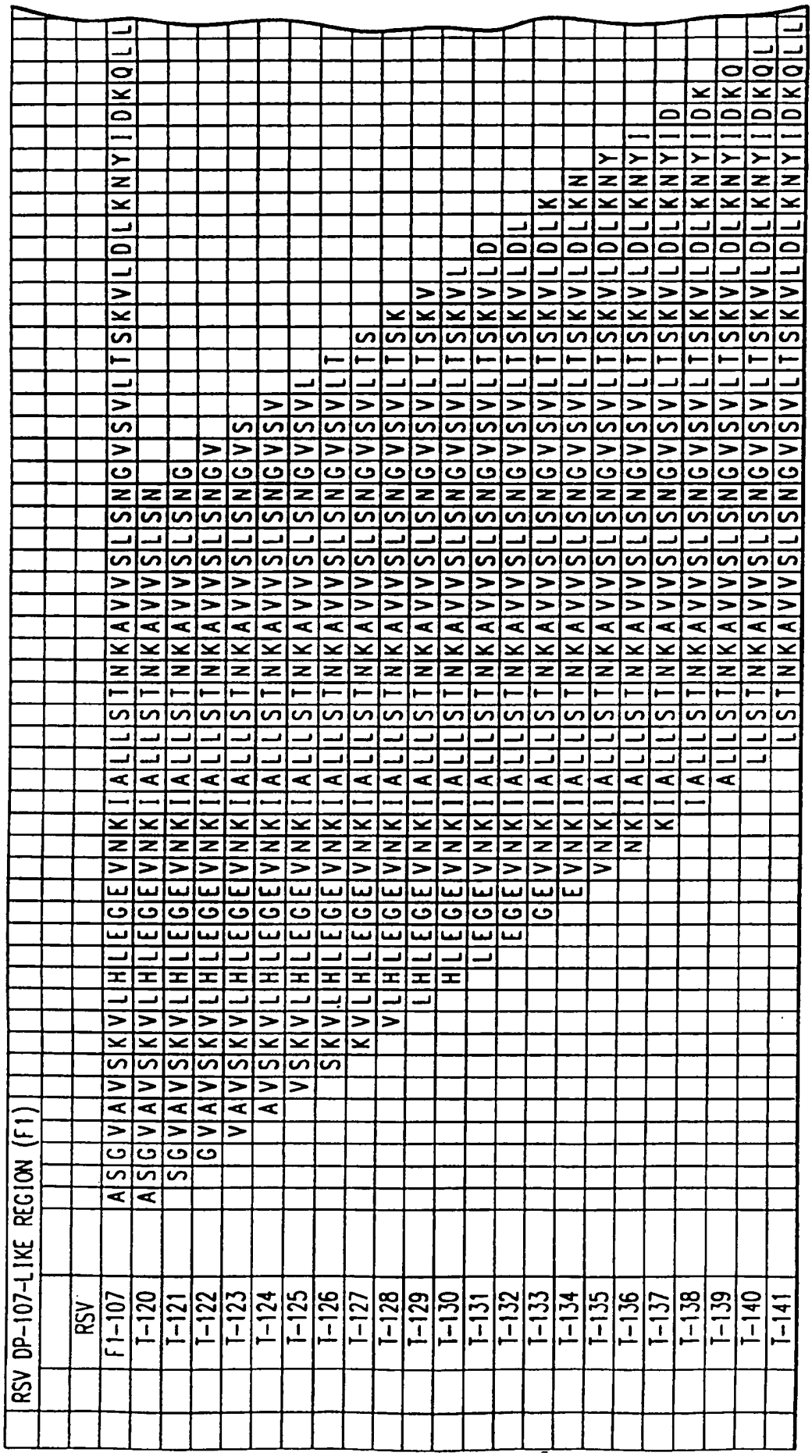

RSV DP-107-LIKE REGION (F1)
RSV
F1-107
T-120
T-121
T-122
T-123
T-124
T-125
T-126
T-127
T-128
T-129
T-130
T-131
T-132
T-133
T-134
T-135
T-136
T-137
T-138
T-139
T-140
T-141

FIG.27D

		FUSION ASSAY				
		PURIFIED				
	RSV	IC50 XTT				
	F-107	(μg/ml)	AV	CD		
	T-120	204	-	-		
	T-121	354	-	-		
	T-122	347	-	-		
	T-123	126	+/-	-		
	T-124	95	+	-		
	T-125	84	+	-		
	T-126	89	+	-		
	T-127	89	+	-		
	T-128	206	-	-		
	T-129	343	-	-		
	T-130	177	-	-		
	T-131	118	+/-	-		
	T-132	272	-	-		
	T-133	307	+/-	-		
	T-134	187	+/-	-		
	T-135	60	+	-		
	T-136	194	-	-		
	T-137	99	+	-		
	T-138	38	++	-		
	T-139	86	+	+/-		
	T-140	160	-	+/-		
	T-141	204	-	+/-		

FIG.27E

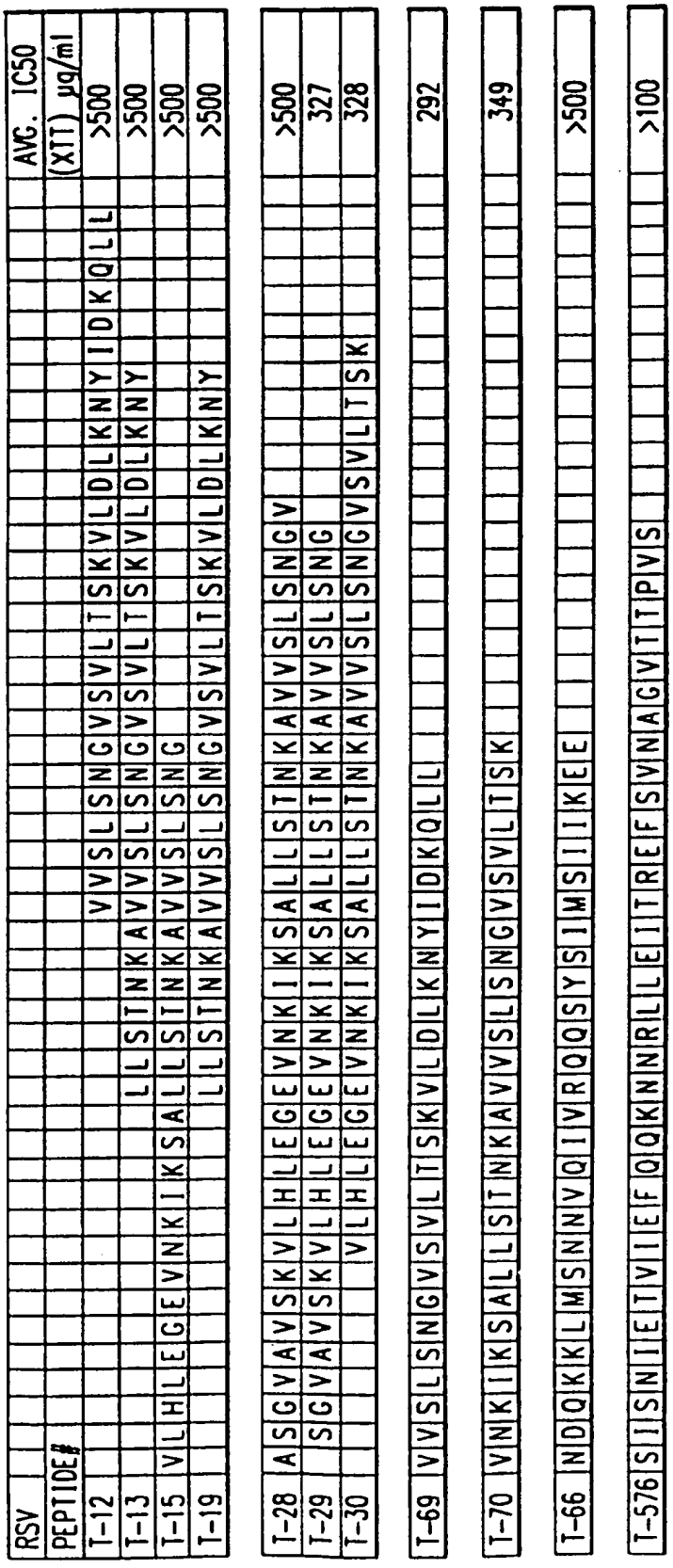

RSV
PEPTIDE#
AVG. IC50 (XTT) µg/ml
T-12 VVSLLSNGVSVLTSKVLDLKNYIDKQLL >500
T-13 LLLSTNKAVVSLLSNGVSVLTSKVLDLKNY >500
T-15 VLHLLEGEVNKIKSALLSTNKAVVSLLSNG >500
T-19 LLLSTNKAVVSLLSNGVSVLTSKVLDLKNY >500
T-28 ASGVAVSKVLHLLEGEVNKIKSALLSTNKAVVSLLSNGV >500
T-29 SGVAVSKVLHLLEGEVNKIKSALLSTNKAVVSLLSNG 327
T-30 VLHLLEGEVNKIKSALLSTNKAVVSLLSNGVSVLTSK 328
T-69 VVSLLSNGVSVLTSKVLDLKNYIDKQLL 292
T-70 VNKIIKSALLSTNKAVVSLLSNGVSVLTSK 349
T-66 NDQKKLMSNNVQIIVRQQSYSIIMSIIIKEE >500
T-576 SIISNIIETVIIEIFQQKNNRLLEIITREFSVNAGVTTPVS >100

FIG.27F

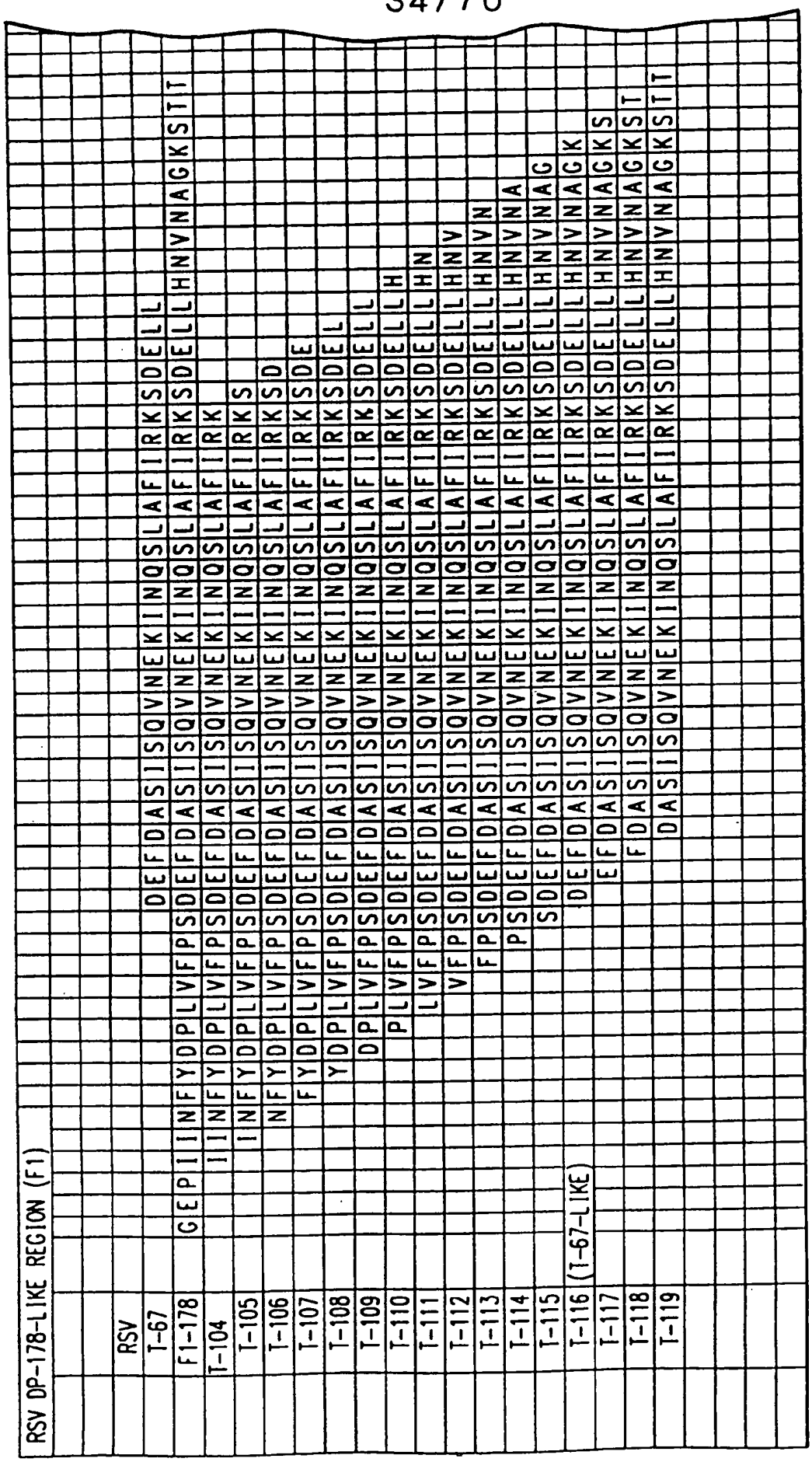
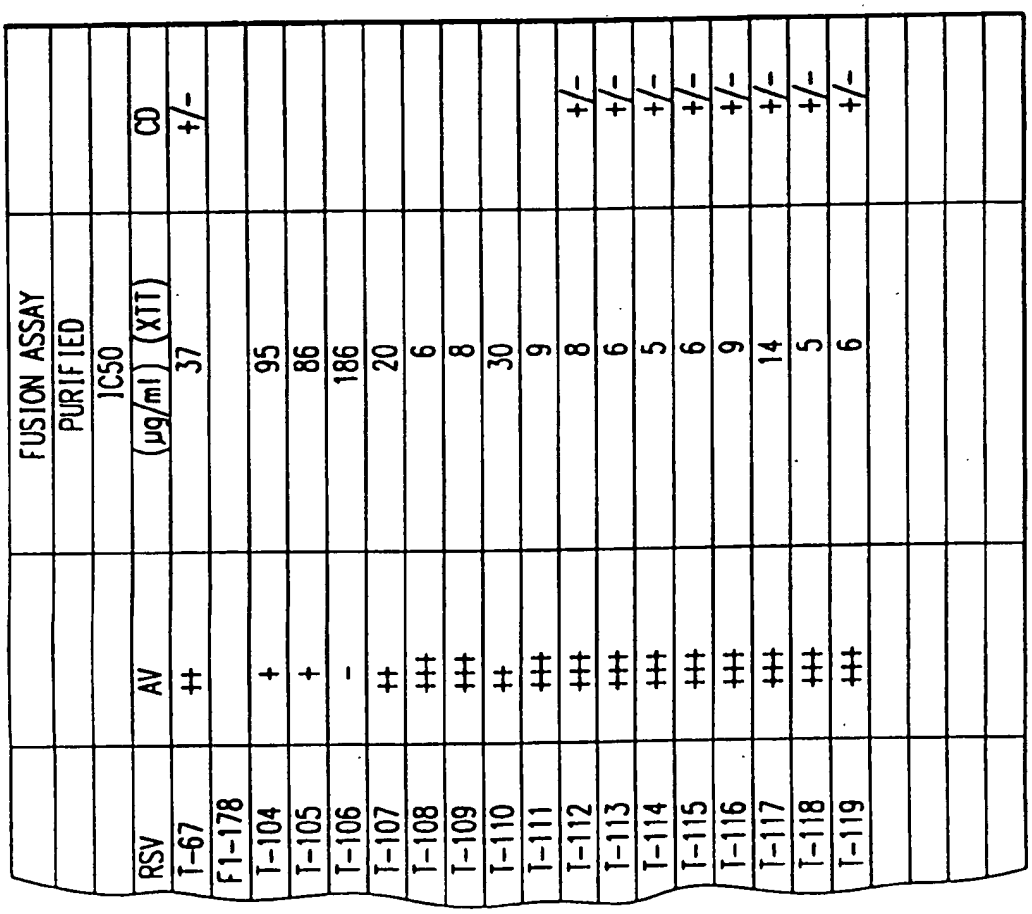

RSV DP-178-LIKE REGION (F1)
RSV
T-67
F1-178
T-104
T-105
T-106
T-107
T-108
T-109
T-110
T-111
T-112
T-113
T-114
T-115
T-116 (T-67-LIKE)
T-117
T-118
T-119

FIG.28A



		FUSION ASSAY			
		PURIFIED			
		IC50			
RSV	AV	(μg/ml) (XTT)	CD		
T-67	++	37	+/-		
F1-178					
T-104	+	95			
T-105	+	86			
T-106	-	186			
T-107	++	20			
T-108	+++	6			
T-109	+++	8			
T-110	++	30			
T-111	+++	9			
T-112	+++	8	+/-		
T-113	+++	6	+/-		
T-114	+++	5	+/-		
T-115	+++	6	+/-		
T-116	+++	9	+/-		
T-117	+++	14	+/-		
T-118	+++	5	+/-		
T-119	+++	6	+/-		

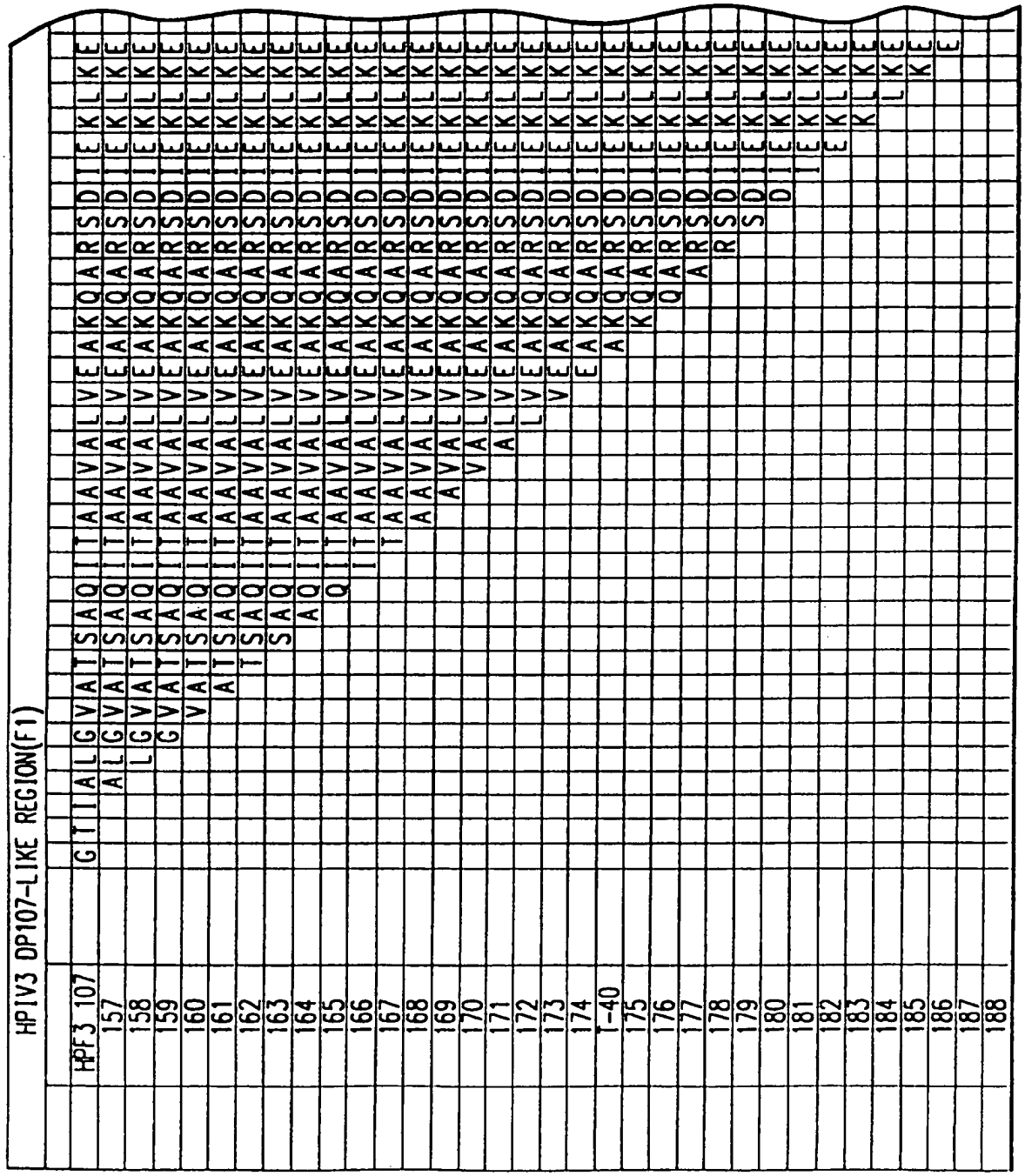
FIG.28B

RSV PEPTIDE#	AVG. IC50 (XTT)ug/ml
T-71 PIINFYDPLVFPSDEFDASISQVNEKINQSLAFIR	138
T-384 RMKQLEDKVEELLSKLAFIRKSDELLHNV	NOT TESTED
T-613 DELLHNVNAGKST	>100
T-614 KSDELLHNVNAGKST	>100
T-615 IRKSDELLHNVNAGKST	>100
T-616 AFIRKSDELLHNVNAGKST	>100
T-617 FDASISQVNEKINQSLAFI	NOT TESTED
T-662 SLAFIRKSDELLHNVNAGKST	>100
T-663 FDASISQVNEKINQSLAFIRK	NOT TESTED
T-665 FDASISQVNEKINQSLAFIRKSDELLHNVNAGK	7
T-666 FDASISQVNEKINQSLAFIRKSDELLHNVNA	4
T-667 FDASISQVNEKINQSLAFIRKSDELLHNV	4
T-668 FDASISQVNEKINQSLAFIRKSDELLH	5
T-669 FDASISQVNEKINQSLAFIRKSDEL	80
T-670 FDASISQVNEKINQSLAFIRKSD	>100
T-671 ASISQVNEKINQSLAFIRKSDELLHNVNAGKST	8
T-672 ISQVNEKINQSLAFIRKSDELLHNVNAGKST	6
T-673 QVNEKINQSLAFIRKSDELLHNVNAGKST	14
T-674 NEKINQSLAFIRKSDELLHNVNAGKST	>100
T-675 KINQSLAFIRKSDELLHNVNAGKST	>100
T-676 NQSLAFIRKSDELLHNVNAGKST	>100
T-730 FDASISQVNEKINQSLAFIRKSDELLHNVNAGKST	NOT TESTED

FIG.28C

AMENDED SHEET (RULE 91)

FIG.29A


HPIV3 DP107-LIKE REGION(F1)
HPF3 107
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
T-40
175
176
177
178
179
180
181
182
183
184
185
186
187
188

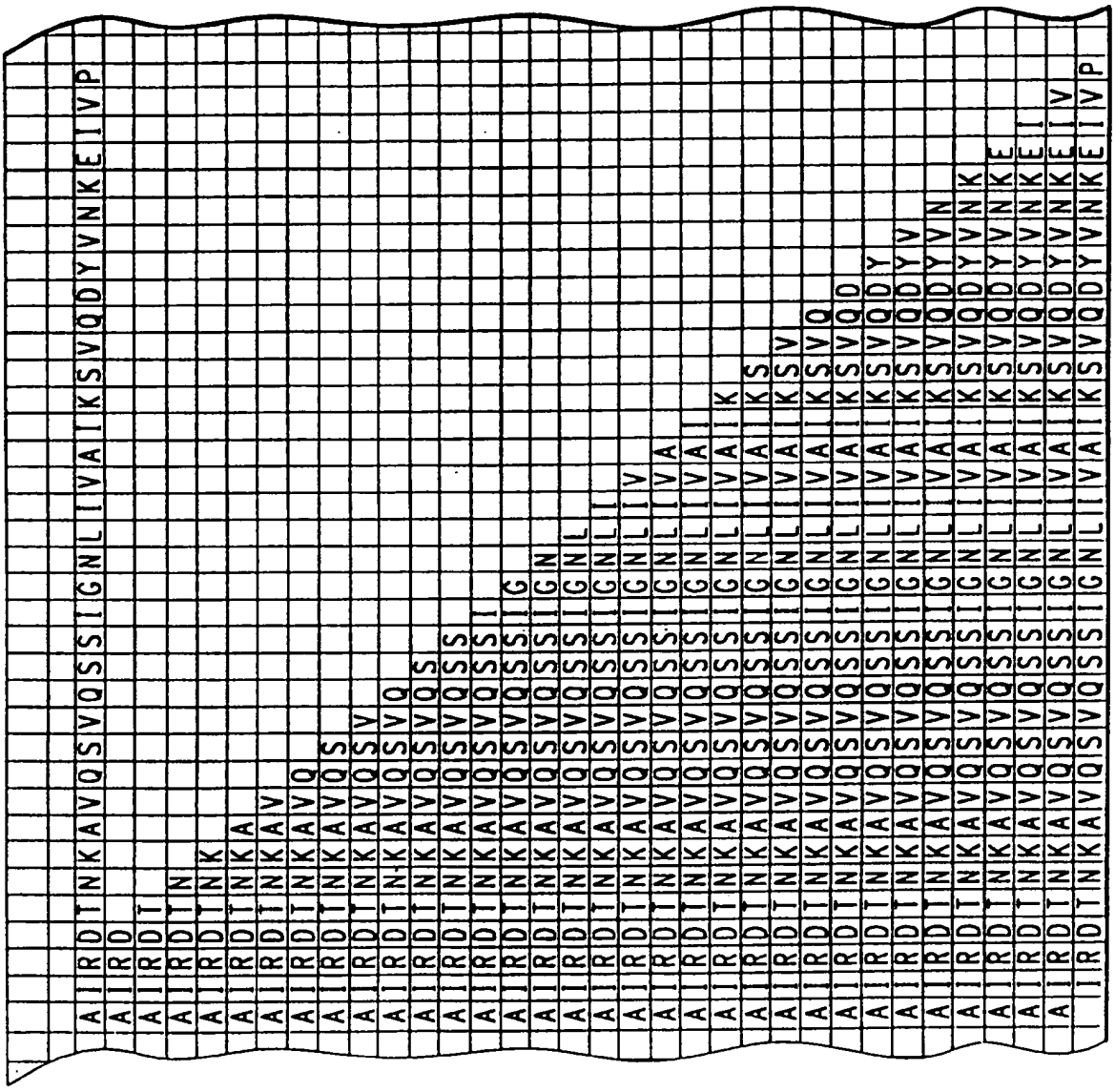


FIG.29B

FIG.29C

HPIV3 107	AV	IC50 (UG/ML)	CD
157	-	574*	+
158	-	146*	+
159	-	707*	+
160	-	536*	+
161	-	390*	+
162	-	403*	+
163	-	123*	+
164	-	512.067*	++
165	-	742*	-
166	-	540*	-
167	-	215*	-
168	-	680*	-
169	-	137*	-
170	-	456*	-
171	-	437*	-
172	+	63*	-
173	++	30*	-
174	+	56*	++
T-40	+/-		++
175	+/-	110*	++
176	-	197.75*	++
177	-	350*	+
178	++	30*	+
179	-	295*	-
180	-	732*	-
181	-	929*	-
182	-	707*	-
183	-	218.50*	++
184	+	67.8*	++
185	-	542*	-
186	-	613*	-
187	-	152*	-
188	-	669*	-

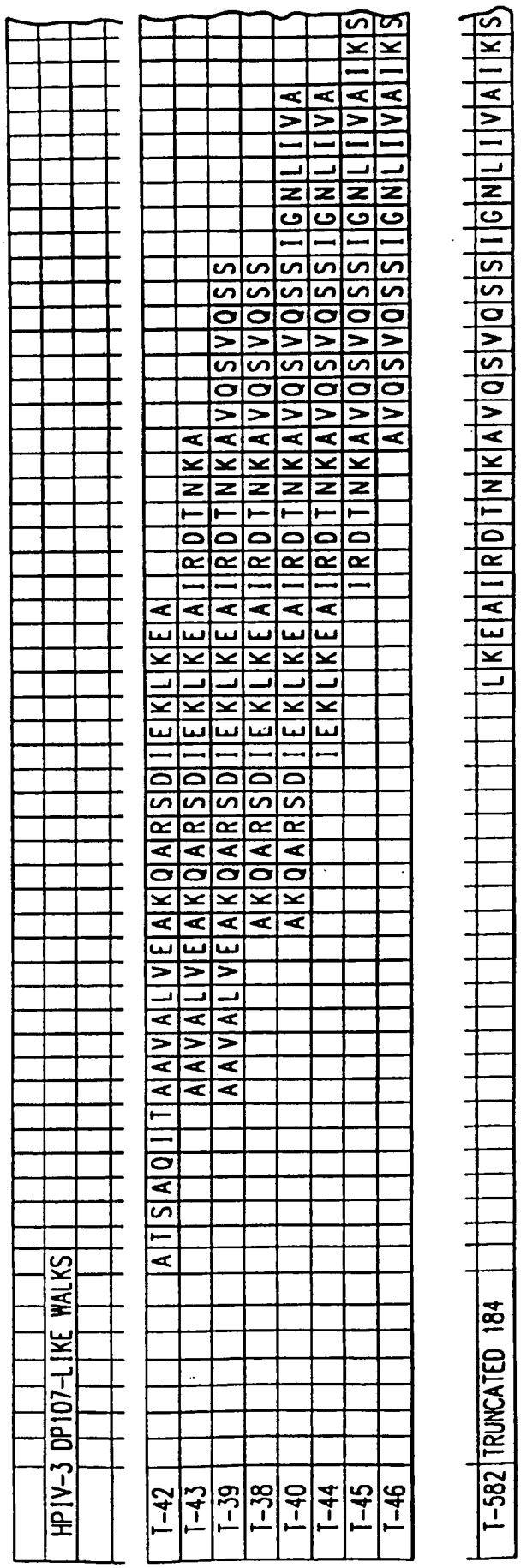

HP1V-3 DP107-LIKE WALKS
T-42
T-43
T-39
T-38
T-40
T-44
T-45
T-46
T-582 TRUNCATED 184

FIG.29D

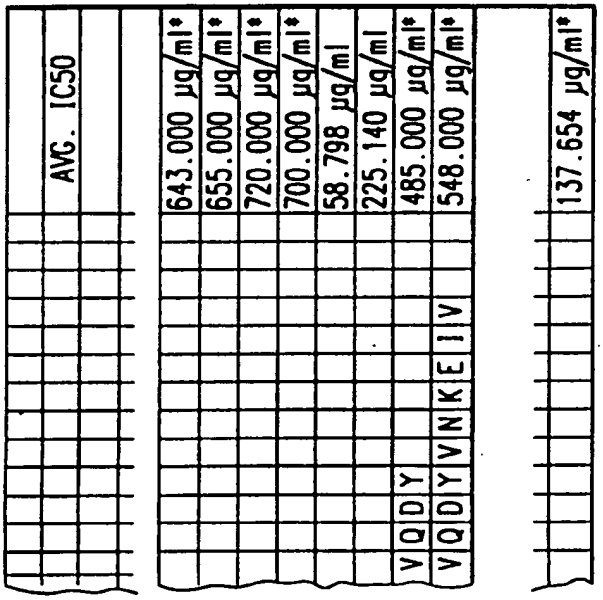

AVG. IC50
643.000 µg/ml*
655.000 µg/ml*
720.000 µg/ml*
700.000 µg/ml*
58.798 µg/ml
225.140 µg/ml
485.000 µg/ml*
548.000 µg/ml*
137.654 µg/ml*
VQDY
VQDYVNKEIIV

FIG.29E

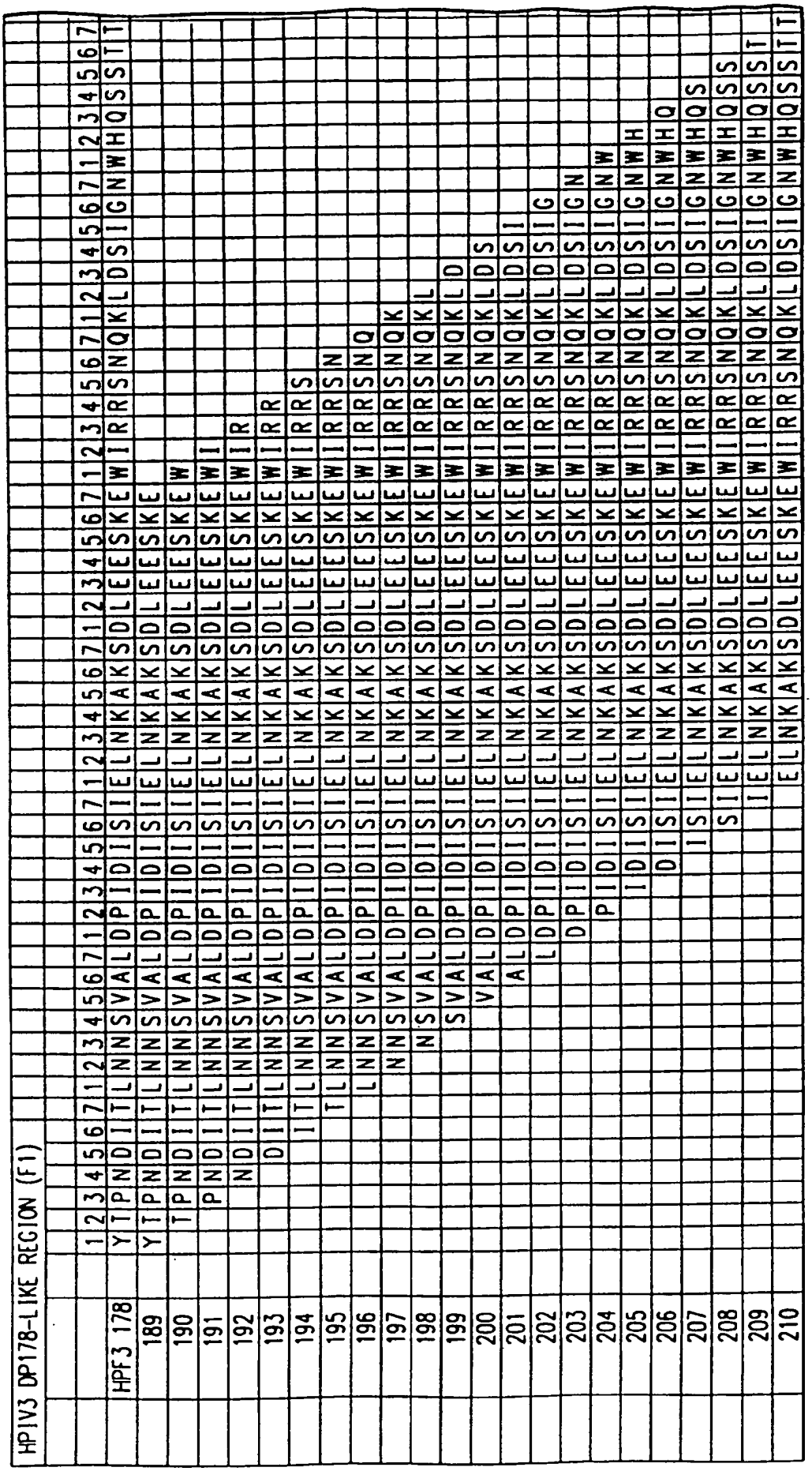

HP1V3 DP17B-LIKE REGION (F1)
HPF3 178
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210

FIG.30A

****
User ID

```
         lll
          ll
 oooo     ll     sssss   oooo   rr rrr
oo  oo    ll    ss      oo  oo   rrr rr
oo  oo    ll     ssss   oo  oo   rr  rr
oo  oo    ll        ss  oo  oo   rr
 oooo    llll   sssss    oooo   rrrr
```

****

Job Number
181

Date Printed
9/21/01

Time Printed
3:03:16 PM

HP1V3 178	AV	IC50 (μg/ml)	CD
189	-	827*	-
190	-	775*	-
191	-	612*	-
192	-	699*	-
193	-	525*	-
194	+	61*	-
195	+	49	++
196	++	3.1	+
197	++	71.15	++
198	+++	0.325	+
199	++	2.3*	+
200	++	1.0*	++
201	+++	0.224*	+
202	+++		+
203	+++	0.390*	+
204	+++	0.213	+
205	+++	0.174	+
206	++	2.0*	+
207	++	2.0*	+
208	++	37*	+
209	++	1.0*	+
210	++	2.0*	+

FIG.30B

T-269	TRUNCATED 201	EWIRRSNQKLDSI	457.500UG/ML
T-626	205 MUTANT	IDISIELNKAKSDLEESKEWIKKSNQKLDSIGNWH	209.589NG/ML
T-383	RMKQLEDKVEELLSKLEWIRRSNQKLDSI		NOT DONE
T-577	DQQIKQYKRLLDRLIIPLYDGLRQKDVIVSNQESN		133.793UG/ML*
T-578	YSELTNIFGDNIGSLQEKGIKLQGIASLYRTNITEI		107.177UG/ML*
T-579	TSITLQVRLPLLTRLLNTQIYRVDSISYNIQNREWY		NOT DONE

FIG.30C

FUSION ♥ALLMOTI5♥
PEPTIDE ♠107x178x4♠
.....RNKRGVFVLGFLGFLATAGSAMGAAS ♠♥ XXXXAQSRTLLAGIVQQQQQ

LLDVVKRQQELLRLTVWGTKNLQTRVTAIEKYLKDQAQL♠NAWG♥ CAF

♥ALLMOTI5♥
*LVS PREDICTED COILED-COIL
RQVCHTTVPWPNASLTPDW *NND ♥TWQEWERKVDFLEENITALLEEAQIQQ

♠107x178x4♠
EKNMY ♠ELQKLNSWD* VF♥ GNXXXXXXXXXXXXXXXXXXXXXXXXXXXX♠

IYIVMLAKLRQGYRPVFSSPPSYFQXTHTQQDPALPTREGKEGDGGEGGGNSSWP

WQIEYIHF

FIG. 31

MTRRRVLSVVVLLAALACRLGAQTPEQPAPPATTVQPTATRQQTSFPFRVCELSSHGDLFRFSSD

♠ 107x178x4♠

IQCPSFGTRENHTEGLLMVFKDNIIPYSF ♠ KVRSYTKIVTNILIYNGWYADSVTNRHE♠

EKFSVDSY ETDQMDTIYQ CYNAVKMTKD GLTRVYVDRD GVNITVNLKP TGGLANGVRR

YASQTELYDA PGWLIWTYRT RTTVNCLITD MMAKSNSPFD FFVTTTGQTV EMSPFYDGKN

KETFHERADS FHVRTNYKIV DYDNRGTNPQ GERRAFLDKG TYTLSWKLEN RTAYCPLQHW

QTFDSTIATE TGKSIHFVTD EGTSSFVTNT TVGIELPDAF KCIEEQVNKT HEKYEAVQD

RYTKGQEAIT YFITSGGLLL AWLPLTPRSL ATVKNLTELT TPTSSPPSSP SPPAPSAARG

STPAAVLRRR RRDAGNATTP VPPTAPGKSL GTLNNPATVQ IQFAYDSLRR QINRMLGDLA

RAWCLEQKRQ NMVLRELTKI NPTTVMSSIY GKAVAAKRLG DVISVSQCVP VNQATVTLRK

SMRVPGSETM CYSRPLVSFS FINDTKTYEG QLGTDNEIFL TKKMTEVCQA TSQYYFQSGN

♠107x178x4♠

EIHVYNDYHH FKTIELDGIA TLQTFISLNT ♠SLIENIDFASLELYSRDEQRASNVFD *LE♠

LVS PREDICTED COILED COIL TM Potential

GIFREYNFQAQNIAGLRKDLDNAVSN* GRNQ FVDGLGELMDSLGSVG QSITN

♣P12LZIPC♣

TM Potential TM Potential

LVSTVGGLFSSLVSGFISF FK N ♣PFGGMLILVLVAGVVILVISL♣ TRRTRQMS

QQPVQMLYPG IDELAQQHAS GEGPGINPIS KTELQAIMLA LHEQNQEQKR AAQRAAGPSV

ASRALQAARDRFPGLRRRRY HDPETAAALL GEAETEF

FIG. 32

MMDPNSTSED VKFTPDPYQV PFVQAFDQAT RVYQDLGGPS QAPLPCVLWP VLPEPLPQGQ

LTAYHVSTAP TGSWFSAPQP APENAYQAYA APQLFPVSDI TQNQQTNQAG GEAPQPGDNS

TVQTAAAVVF ACPGANQGQQ LADIGVPQPA PVAAPARRTR KPQQPESLEE CDSELEI

@DNA BINDING@ ♠107x178X4♠ +DIMERIZATION+
@KRY KNRVASRKCRAK ♠FK@ Q +LLQHYREVAAAKSSENDRLRLLLKQ♠

MCPSLDVD+ SI IPRTPDVLHE DLLNF

FIG. 33

FUSION
PEPTIDE ♥ALLMOTI5♥ *LVS COILED-COIL*
FAG ♥VVLAGAALGVATAAQITAGIALHQSML*NSQAIDNLRASLETTN

QAIEAIRQAGQEMI*LAVQGVQDYINN♥ ELIPSMNQLSCDLIGQKLGLKLLRYYT

♣P23LZIPC♣
♣P6,12LZIPC♣
♠107X178X4♠
♥ALLMOTI5♥
EILSLFGPSLRD ♣PISA ♠♥EISIQLSYALGGDINKV♣ LEKLGYSGGDL♣

♣P1,12LZIPC♣
LGILES♠ RGIKARI♥ THVDTESYFIVLSIAY ♣PTLSEIKGVIVHRLEGV♣ SY

NIGSQEWYTTVPKYVATQGYLISNFDESSCTFMPEGTVCSQNALYPMSPLLQECL

RGSTKSCARTLVSGSFGNRFILSQGNLIANCASILCKCYTTGTIINQDPDKILTYIAA

♣P23LZIPC♣
♣P12LZIPC♣
♥ALLMOTI5♥
LVS COILED-COIL
DHCPVVEVNGVTIQVGSRRYPDAVYLHRIDLGP ♣P ♥IS *LERLDVGTNLGN

♦TRANSMEMBRANE REGION♦
AIAKLEDAKELL♣ ESSDQI*L♣ RSMK ♦GLSSTSIVYILI♥ AVCLGGLIGIP

ALICCC♦ RGRCNKKGEQVGMSRPGLKPDLTGTSKSYVRSL

FIG. 34

Pre S1 and Pre S2
MGQNLSTSNPLGFFPDHQLDPAFRANTANPDWDFNPNKDTWPDANKVGAGAFG

LGFTPPHGGLLGWSPQAQGILQTLPANPPPASTNRQSGRQPTPLSPPLRNTHPQAM

QWNSTTFHQTLQDPRVRGLYFPAGGSSSGTVNPVLTTASPLSSIFSRIGDPALN

MAJOR SURFACE ANTIGEN(HBs)
FUSION
PEPTIDE
♣P12 & 23LZIPC♣
MENITSG **FLG** ♣**PLL** VLQAGFFLLTRILTI♣ PQSLDSWWTSLNFLGGTTVCLG

♣P12 & 23LZIPC♣
QNSQSPTSNHSPTSCPPTC ♣PGYRWMCLRRFIIFLFILLLCLIFLLVLLDYQGML♣

PVCPLIPGSSTTSTGPCRTCMTTAQGTSMYPSCCCTKPSDGNCTCIPIPSSWAFGKF

♦TRANSMEMBRANE REGION♦
LWEWASARFSWLS ♦**LLVPFVQWFVGLSPTVWLSVI**♦ WMMWYWGPSL

♦TRANSMEMBRANE REGION♦

♦**YSILSPFLPLLPIFFCLWVYI**♦

FIG. 35

FUSION ♥ ALLMOTI5 ♥ ♠107x 178x4♠
PEPTIDE *LVS COILED COIL
AIQLIPLFVG LGI ♥TTAVSTGAAGLGVS ♠IT *QYTKLSHQLISDV

QAISSTIQDLQDQVDSLAEVVLQ* NRRGLDLLTAE♠ QGGI♥

CLALQEKCCFYANKSGIVRDKIKNLQDDLERRRRQLIDNPFWTSFHG

FLPYVMPLLGPLLCLLLVLSFGPIIFNKLMTFIKHQIESIQAKPIQVHYH

TRANSMEMBRANE REGION
RLEQEDSGGSYLTLT.....??????????????????????????....

FIG. 36

MKAQKGFTLI ELMIVVAIIG ILAAIAPGQ

♠107x178x4♠
♥ALLMOTI5♥
♠♥YQDYTARTQVTRAVSEVSALKTAAESAILEGKEIVSSA♠ T♥

PK DTQYDIGFT

♠107x178x4♠
♥ALLMOTI5♥
♠♥ESTLLDGSGKSQIQVTDNQDGTVELVATLGKSSGS♠ AIKGAVITSR♥

KNDGV WNCKITKTPT AWKPNYAPAN CPKS

FIG. 37

MNTLQKGFTL IELMIVIAIV GILAAVALPA YQDYTARAQV

SEAILLAEGQ KSAVTEYYLN HGIWP

♠107x178x4♠
♥ALLMOTI5♥
♠♥KDNTSAGVASSSSIKGKYVKEVKVENGVVTAT♠

MNSSNVNKEIQGKKLSLWAKRQDGSVKW♥

FCGQP VTRNAKDDTV TADATGNDGK IDTKHLPSTC RDNFDAS

FIG. 38

MKKTLLGSLI LLAFAGNVQA DINTETSGKV TFFGKVVENT

CKVKTEHKNL SVVLNDVGKN SLSTKVNTAM PTPFTITLQN

CDPTTANGTA NKANKVGLYF Y

♠107x178x4♠
♥ALLMOTI5♥
♠♥SWKNVDKENNFTLKNEQTTADYATNVNI♠

QLMESNGTKAISVVGKETE♥

DF MHTNNNGVAL NQTHPNNAHI SGSTQLTTGT NELPLHFIAQ

YYATNKATAG KVQSSVDFQI AYE

FIG. 39

MNKKLLMNFF IVSPLLLATT ATDFTPVP

♠107x178x4♠
♥ALLMOTI5♥
♠♥LSSNQIIKTAKASTNDNIKDLLDWYSSGSDTFTNS♠♥

EVLDNSL GSMRIKNTDG SISLIIFPSP YYSPAFTKGE KV

♠107x178x4♠
♠DLNTKRTKKSQHTSEGTYIHFQISGVT♠

N TEKLPTPIEL PLKVKVHGKD SPLKYG

♣P12LZIPC♣
♣PKFDKKQLAISTLDFEIRHQLTQI♣

HGLYRSSDKT GGYWKITMND GSTYQSDLSK KFEYNTEKPP

INIDEIKTIE AEIN

FIG. 40

♥ALLMOTI5♥
MKKTAFILLL FIALTLTTSP L ♥VNG

♠107x178x4♠
LVS PREDICTED COILED-COIL
S ♠EKSEEINEKDLRKKSELQRNALSNLRQIY YYNEKAITENKESDD♠

QFLENTLL♥ FKG FFTGHPW

♠107x178x4♠
♠YNDLLVDLGSKDATNKYKGKKVDLYGAY♠

YGYQCAGGTPNKTACMYGGVTLHDN NRLTEEKKVP INLWIDGKQTTV

♣P12LZIPC♣
♣PIDKVKTSKKEVTVQELDL♣ QARHYLHGK FGLYNSDSFGGKVQ

♣P12LZIPC♣
RGLIVF HSSEGSTVSY DLFDAQGQY ♣P DTLLRIYRDN KTINSENLHI♣

DLYLYTT

FIG. 41

♥ALLMOTI5♥
MKKTAFTLLL FIALTLTTSP L ♥VNGS

♠107x178x4♠
♠EKSEEINEKDLRKKSELQGTALGNLKQIYYYNEKAKTENKESHD♠ Q♥

FLQHTILFKG FFTDHSWYND LLVDFDSKDI VDKYKGKKVDLYGAYY

GYQC AGGTPNKTAC MYGGVTLHDN NRLTEEKKVPINL WLDGKQNTV

♠107x178x4♠
♥ALLMOTI5♥
♣P12LZIPC♣
♣P ♥L ♠ETVKTNKKNVTVQELDLQARRYL♣ QEKYNLYN♠

SDVFDGKVQR♥ GLIVF HTSTE

♣P23LZIPC♣
♣PSVNYDLFGAQGQYSNTLLRIYRDNKTINSENMHI♣ DIYLYTS

FIG. 42

MKNITFIFFILLASPLYANGDRLYRADSRPPDEIKRFRSLMPRGNEYFDRGT

♥ALLMOTI5♥
♥QMNINLYDHARGTQTGFVRYDDGYV

♠107x178x4♠
♠STSLSLRSAHLAGQYILSGYSLTIYIVI♠ ANMFNVNDVISVY♥

SP HPYEQEVSAL GGIPYSQIYG WYRVNFGVID ERLHRNREYR

DRYYRNLNIA PAEDGYRLAG FPPDHQAWRE EPWIHHAPQG

CGDSSRTITG DTCNE

♥ALLMOTI5♥
♥ETQNLSTIYLREYQSKVKRQIFSDYQSEVDIYNRIRDEL♥

FIG. 43

MMFSGFNADY EASSSRCSSA SPAGDSLSYY HSPADSFSSM

GSPVNAQDFC TDLAVSSANF IPTVTAISTS PDLQWLVQPA

LVSSVAPSQT RAPHPFGVPA PSAGAYSRAG VVKTMTGGRA

LVS PREDICTED COILED-COIL

QSIGRRGKVE QLSPEEEEKR RIRRE *RNKMA AAK

♠107x178x4♠

♥ALLMOTI5♥

♥CRNRRREL ♠TDTLQAETDQLEDEKSALQTEIANLLKEKEKL♥

EFILAAHR* PACKIPDDL GFPEEMSVAS LDLTGGLPEV

ATPESEEAFT LPLLNDPEPK PSVEPVKSIS SMELKTEPFD

DFLFPASSRP SGSETARSVP DMDLSGSFYA LPLLNDPEPK

PSVEPVKSIS SMELKTEPFD DFLFPASSRP SGSETARSVP

DMDLSGSFYA GSSSNEPSSD SLSSPTLLAL

FIG. 44

SGWESYYKTEGDEEAEEEQEENLEASGDYKYSGRDSLIFLVDASKA

MFESQSEDELTPFDMSIQCIQSVYISKIISSDRDLLAVVFYGTEKDKNS

VNFKNIYVLQELDNPGAKRILELDQFKGQQGQKRFQDMMGHGSDY

SLSEVLWVCANLFSDVQFKMSHKRIMLFTNEDNPHGNDSAKASRAR

TKAGDLRDTGIFLDLMHLKKPGGFDISLFYRDIISIAEDED

♠107x178x4♠
♥ALLMOTI5♥
LVS PREDICTED COILED-COIL

♥LRVH *FEE ♠SSKLEDLLRKVRAKETRKRALSRLKLKLNKDIV* ISV

GIYNLVQKAL♥ KPPPIKLYRETN♠ EPVKTKTRTFNTSTGGLLLPSDTKR

SQIYGSRQIILEKEETEELKRFDDPGLMLMGFKPLVLLKKHHLRPSLFVYPE
ESLVIGS STLFSALLIKCLEKEVAALCRYTPRRNIPPYFVALVPQEEELDDQK
IQVTPPGFQLVFLPFADDKRKMPFTEKIMATPEQVGKMKAIVEKLRFTYRS
DSFENPVLQQHFRNLEALALDLME

♣PI2LZIPC♣
♣PEQAVDLTLPKVEAMNKRL♣ GSLVDEFKELVYPPDYNPEGKVTKR
KHDNEGSGSKRPKVEYSEEELKTHISKGTLGKFTVPMLKEACRAYGLKSG
LKKQELLEALTKHFQD

FIG. 45

GGGALSPQHSAVTQGSIIKNKEGMDAKS

♠107x178x4♠
♥ALLMOTI5♥
♥♠LTAWSRTLVTFKDVFVDFTREEWKLLDT♠ AQQIVYRNV
MLENYKNLVSLGYQLT♥ KPDVILRLEKGEEPWLVEREIHQETHPD
SETAFEIKSSVSSRSIFKDKQSCDIKMEGMARNDLWYLSLEEVWKCR
DQLDKYQENPERHLRHQLIHTGEKPYECKECGKSFSRSSHLIGHQKT
HTGEEPYECKECGKSFSWFSHLVTHQRTHTGDKLYTCNQCGKSFVH
SSRLIRHQRTHTGHKPYECPECGKSFRQSTHLILHQRTHVRVRPYECN
ECGKSYSQRSHLVVHHRIHTGLKPFECKDCGKCFSRSSHLYSHQRTH
TGEKPYECHDCGKSFSQSSALIVHQRIHTGEKPYECCQCGKAFIRKN
DLIKHQRIHVGAETYKCNQCGIIFSQNS

♣P23LZIPC♣
♣PFIVHQIAHTGEQFLTCGNQCGTALVNTSNLIGQTNHI♣ RENAY

FIG. 46

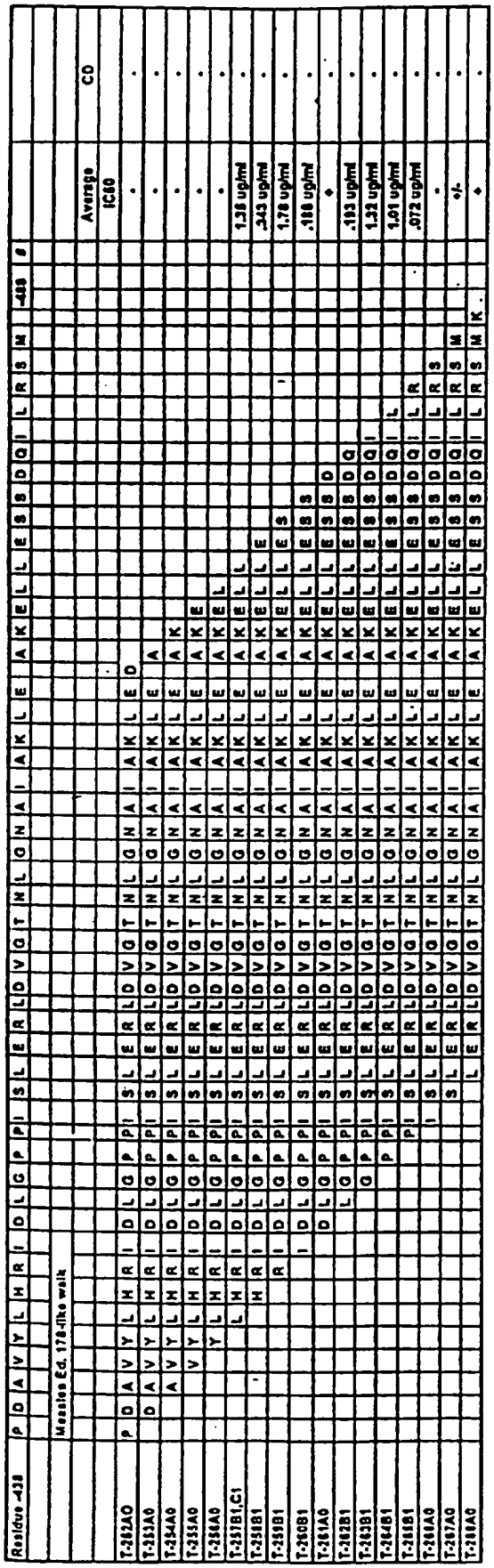

Residue #38
Measles Ed. 176-like walk
Average IC50
CO
T-252A0
T-253A0
T-254A0
T-255A0
T-256A0
T-251B1,C1
T-258B1
T-259B1
T-260B1
T-261A0
T-262B1
T-263B1
T-264B1
T-265B1
T-266A0
T-267A0
T-268A0
1.36 ug/ml
.243 ug/ml
1.78 ug/ml
.188 ug/ml
.193 ug/ml
1.32 ug/ml
1.01 ug/ml
.072 ug/ml
+/-

FIG. 47

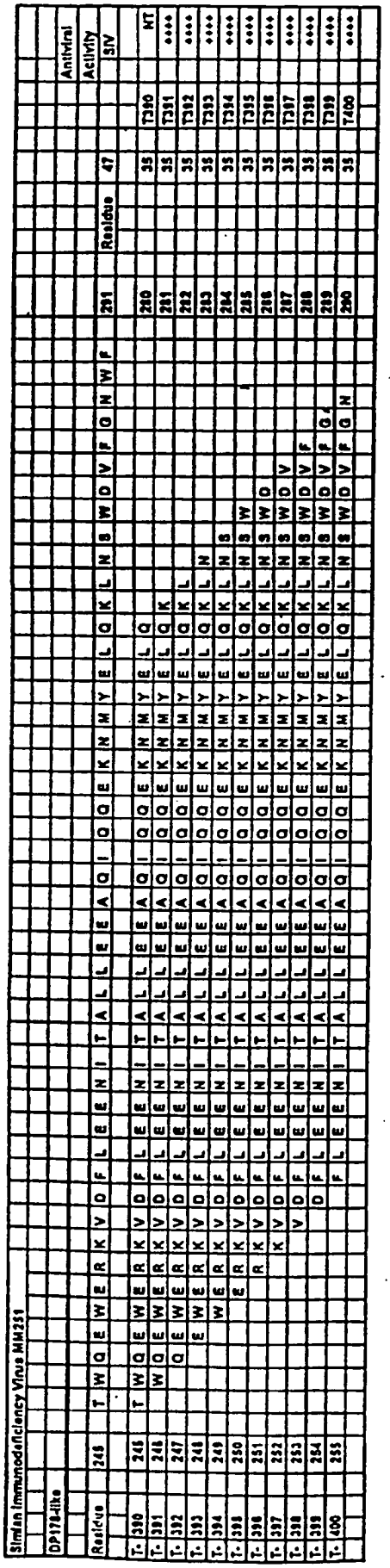

Simian Immunodeficiency Virus MM251
DP178-like
Residue
Residue
Activity
SIV
Animal

FIG. 48

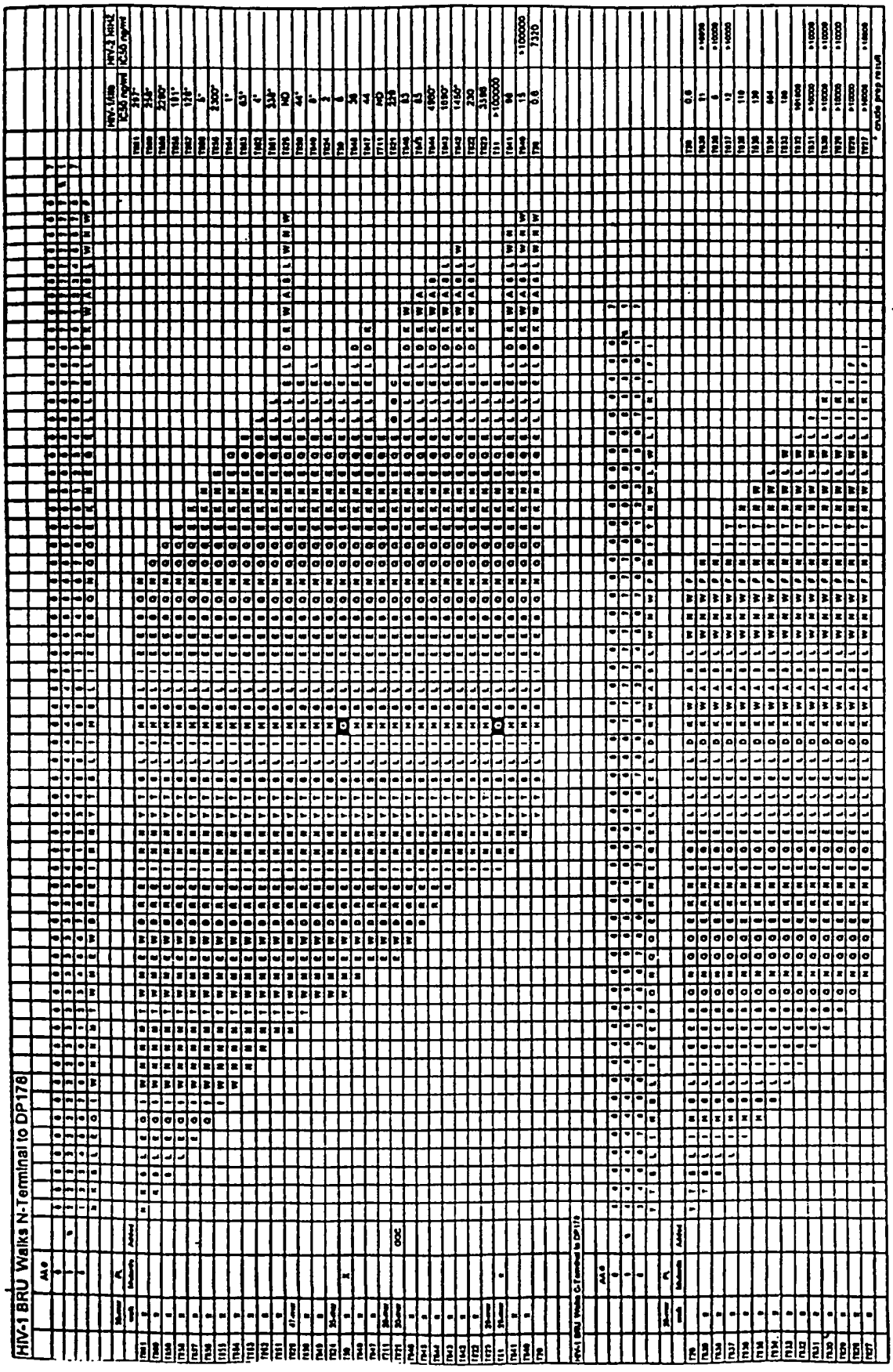

HIV-1 BRU Walks N-Terminal to DP178
HIV-1 BRU Walks C-Terminal to DP178

FIG. 49A

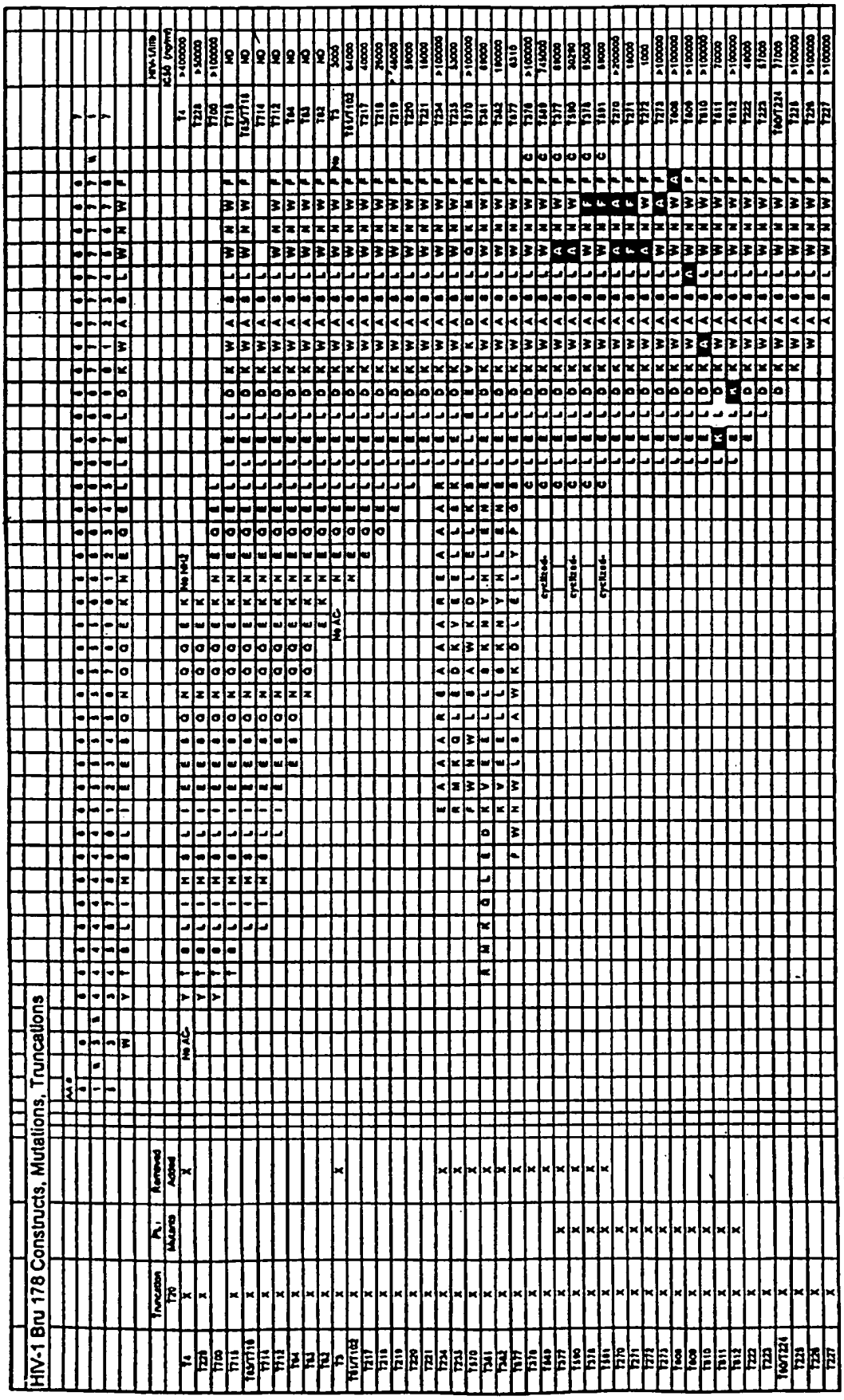


FIG. 49B

HIV-1 Bru 178 Constructs, Mutations

	Pt. Mutants	Removed Added		HIV-1/IIIb IC50 (ng/ml)
T595		X		112
T574		X	C13H27CO-	ND
T680		X	Free Termini	70
T573		X	No Ac-	ND
T84		X	Dig-	ND
T83		X	Biotin-	18
T706		X	Biotin-NH(CH2)8CO-	ND
T707		X	Biotin-NH(CH2)4CO-	ND
T20				0.8
T95	X			43
T96	X			1
T97	X			3
T98	X			18
T99	X			36
T103	X			ND
T212	X			3
T213	X			23
T214	X			18
T215	X			23
T216	X			1000
T229	X			>100000
T230	X			6
T231	X			4
T379	X			0.3
T701	X			3
T702	X			36
T703	X			0.3
T704	X			510
T705	X			14
T706	X			66
T156	X			80000
T89	X			>100000
T90	X			>100000

FIG. 49C

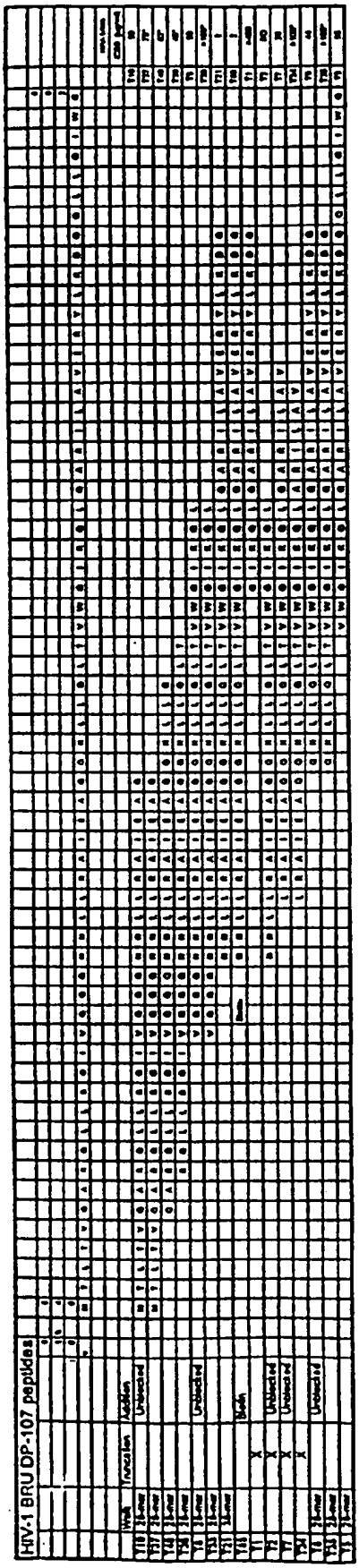


FIG. 5D

EPSTEIN-BARR VIRUS STRAIN B95-8 BZLF1 TRANSACTIVATOR PROTEIN EB1 OR ZEBRA

Residue	173	S E L E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L	219		
				ACT	Res
T-423	173	S E L E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K	208	+ + +	35
T-424	174	E L E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S	209	-	35
T-425	175	L E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S	210	-	35
T-426	176	E I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E	211	-	35
T-427	177	I K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N	212	-	35
T-428	178	K R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D	213	-	35
T-429	179	R Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R	214	-	35
T-430	180	Y K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L	215	-	35
T-431	181	K N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R	216	-	35
T-432	182	N R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L	217	-	35
T-433	183	R V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L	218	-	35
T-434	184	V A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L	219	-	35
#					

Residue	185	A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V D S	230		
				ACT	Res
T-435	185	A S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K	220	-	35
T-436	186	S R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q	221	-	35
T-437	187	R K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M	222	-	35
T-438	188	K C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C	223	-	35
T-439	189	C R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P	224	+ + +	35
T-440	190	R A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S	225	-	35
T-441	191	A K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L	226	+	35
T-442	192	K F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D	227	-	35
T-443	193	F K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V	228	-	35
T-444	194	K Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V D	229	+	35
T-445	195	Q L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V D S	230	+	35
T-446	196	L L Q H Y R E V A A A K S S E N D R L R L L L K Q M C P S L D V D S I	231	-	35
#					

FIG. 51A

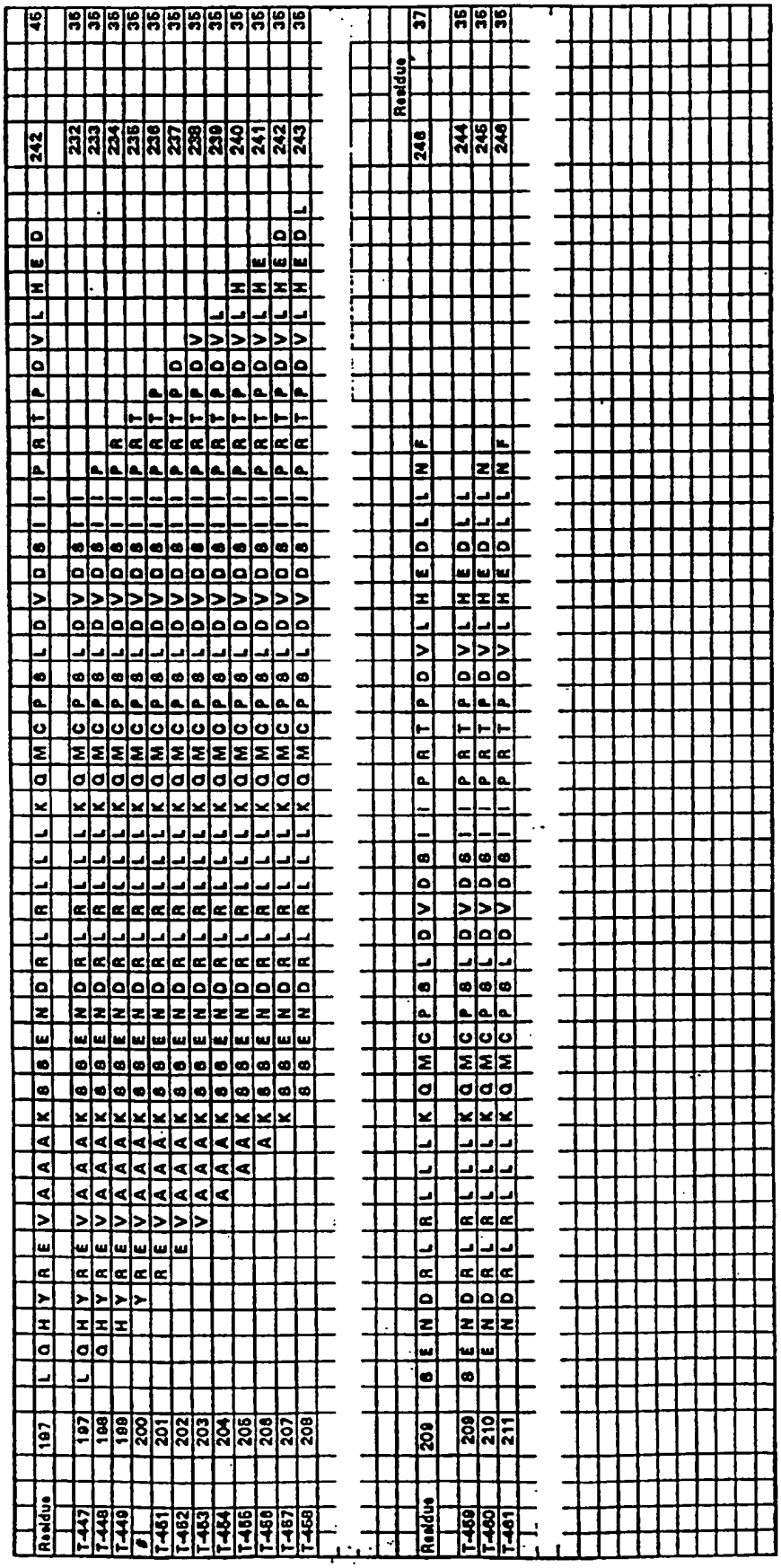


FIG. 51B

DOMAIN I:

174 P-L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-G-T-T-V-C-L-G-Q-N-S-Q-S-P 220

P-L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T
L-L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T
L-V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V
V-L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C
L-Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L
Q-A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G
A-G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q
G-F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N
F-F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S
F-L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S-Q
L-L-T-R-I-L-T-I-P-Q-S-L-D-S-W-W-T-S-L-N-F-L-G-G-T-T-V-C-L-G-Q-N-S-Q-S

FIG.52A

RECTIFIED SHEET (RULE 91)

DOMAIN II:

223 P-G-Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T-T 291

P-G-Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L

G-Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P

Y-R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V

R-W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C

W-M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P

M-C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L

C-L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I

L-R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P

R-R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G

R-F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S

F-I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-G-G-S-S

I-I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T

I-F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S

F-L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T

L-F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G

F-I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P

I-L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C

L-L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R

L-L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T

L-C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C

C-L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M

L-I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T

I-F-L-L-V-L-L-D-Y-Q-G-M-L-P-V-C-P-L-I-P-G-S-S-T-S-T-G-P-C-R-T-C-M-T-T

FIG.52B

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US95/16733

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :C07K 7/04,14/025, 14/16; C12N 9/94, 9/96, 9/98, 9/99
US CL :530/324; 424/184.1
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/324, 325, 326, 327, 328, 329; 424/184.1, 185.1, 186.1, 187.1, 188.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MEDLINE, AIDSLINE, APS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 89, Number 21, issued November 1992, Wild et al, "A Synthetic Peptide Inhibitor of Human Immunodeficiency Virus Replication: Correlation Between Solution Structure and Viral Inhibition", pages 10537-41, see entire document.	1-3, 9, and 10 ---------- 4-8 and 11-15

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
28 MARCH 1996	09 APR 1996
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer JEFFREY STUCKER Telephone No. (703) 308-0196

Form PCT/ISA/210 (second sheet)(July 1992)*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US95/16733

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 91, Number 26, issued December 1994, Wild et al, "Propensity for a Leucine Zipper-Like Domain of Human Immunodeficiency Virus Type 1 gp41 to Form Oligomers Correlates With a Role in Virus-Induced Fusion Rather Than Assembly of the Glycoprotein Complex", pages 12676-80, see entire document.	1-3, 9 and 10 --- 4-8 and 11-15
X --- Y	PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, Volume 81, Number 24, issued December 1984, Collins et al, "Nucleotide Sequence of the Gene Encoding the Fusion (F) Glycoprotein of Human Respiratory Syncytial Virus", pages 7683-87, see pages 7683 and 7685.	1 and 4 --- 9 and 11
X --- Y	VIROLOGY, Volume 204, Number 2, issued 01 November 1994, Bousse et al, "Regions on the Hemagglutinin-Neuraminidase Proteins of Human Parainfluenza Virus Type-1 and Sendai Virus Important for Membrane Fusion", pages 506-514, see pages 506 and 510-513.	1 and 5 --- 9 and 12
X --- Y	JOURNAL OF VIROLOGY, Volume 67, Number 9, issued September 1993, Wang et al, "Ion Channel Activity of Influenza A Virus M2 Protein: Characterization of the Amantidine Block", pages 5585-94, see pages 5585-86.	1 and 6 --- 9 and 13
X --- Y	JOURNAL OF VIROLOGY, Volume 67, Number 5, issued May 1993, Lazinski et al, "Relating Structure to Function in the Hepatitis Delta Virus Antigen", pages 2672-80, see pages 2672-73 and 2678.	1 and 7 --- 9 and 14
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